Road S-33 (Clements Ferry Road) Widening Project: Jack Primus Road to SC 41, Berkeley County, SC

## Appendix G

## Traffic Noise Analysis Report

# NOISE IMPACT ASSESSMENT 

Clements Ferry Road Phase 2<br>From Jack Primus Road to SC 41<br>Berkeley County, South Carolina

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## EXECUTIVE SUMMARY

The following noise assessment has been prepared in compliance with Title 23 of the Code of Federal Regulations, Part 772 (23 CFR Part 772), and will be provided by South Carolina Department of Transportation (SCDOT) to local officials in an attempt to prevent future impacts from traffic noise.

The proposed project is located in the southern portion of Berkeley County, South Carolina. The project consists of widening Clements Ferry Road for approximately 4.5 miles from Jack Primus Road to SC 41. The improvements involve widening the two-lane roadway to a four-lane roadway and adding a curb and gutter, a median, and multi-use path along either one or both sides of the roadway per typical sections.

The TNM2.5 Noise Model was used to analyze the existing condition (2015) and the 2040 design year No-build and Build Alternatives based on preliminary design. Field measurements were performed to establish a sound level baseline for which to compare possible sound level increases as a result of the proposed action. Traffic data was obtained from actual SCDOT vehicle counts and the traffic study entitled "Clements Ferry Road from Jack Primus Road to SC 41 Widening Study," prepared by Haselden and Associates in September 2017.

The modeling results indicated that 73 receivers would have noise levels that approach or exceed the FHWA's Noise Abatement Criteria (NAC) for its respective land use. Forty-nine (49) of the receivers are residential, twenty-three (23) are commercial, and one (1) is a museum/community center (Keith School Museum). All would approach or exceed the NAC for the 2040 design year Build Alternative. Noise abatement was therefore considered for the proposed project. As a result of the mitigation analysis, there were no feasible and reasonable solutions to mitigate for the noise according to the SCDOT Traffic Noise Abatement Policy.

## TABLE OF CONTENTS

I. INTRODUCTION AND PROJECT DESCRIPTION ..... 1
A. Proposed Project Description, Existing Facility and Purposes and Need ..... 1
B. Existing Land Uses ..... 1
II. ANALYSIS METHODOLOGY ..... 1
A. Model Used and Assumptions .....  1
B. Traffic Data ..... 1
C. Receiver Locations ..... 4
D. Field Measurements ..... 4
E. Model Validation ..... 4
III. TRAFFIC NOISE IMPACTS ..... 14
A. Modeled and/or Measured Existing Year Noise Levels ..... 14
B. Modeled Design Year (2040) No-Build Alternative Noise Levels ..... 14
C. Modeled Design Year (2040) Build Alternative Noise Levels ..... 14
IV. FEASIBLE AND RESONABLE CONSIDERATION OF ABATEMENT ..... 22
A. Acquisition of Right-of-Way ..... 22
B. Traffic Management ..... 22
C. Alteration of Horizontal and Vertical Alignments ..... 23
D. Acquisition of real property or interests therein (predominately unimproved property) to serve as a buffer zone to preempt development ..... 23
E. Noise insulation of public use or nonprofit institutional structures ..... 23
F. Noise Barriers ..... 23
V. FINDINGS AND RECOMMENDATIONS ..... 27
VI. CONSTRUCTION NOISE ..... 27
VII. COORDINATION WITH LOCAL OFFICIALS ..... 28
LIST OF TABLES
Table 1: 23 CFR Part 772, Table 1 Noise Abatement Criteria (NAC) Hourly A Weighted Sound Level in Decibels (dB(A)). ..... 5
Table 2: Field Data Count and Classification Summary ..... 13
Table 3: Comparison of Measured Leq to TNM 2.5 Modeled Leq ..... 13
Table 4: Existing and Design Year Sound Levels ..... 15
Table 5: Barrier Evaluation Summary ..... 25
Table 6: Leq Noise Level (dBA) at 50 Feet for Construction Equipment ..... 28
Table 7: Contour Distances (dBA) for Clements Ferry Road Phase 2. ..... 29

## LIST OF FIGURES

Figure 1: Project Location ..... 2
Figure 2: Typical Sections ..... 3
Figure 3. Build 2040 Noise Impacts. ..... 6
APPENDICES
Appendix A: Traffic Data ..... 30
Appendix B: Field Measurements ..... 32
Appendix C: SCDOT's Feasible and Reasonable Worksheets. ..... 59
***Existing, No-Build, and Build TNM Files \& Results provided electronically.

## I. INTRODUCTION AND PROJECT DESCRIPTION

The following noise assessment has been prepared in compliance with Title 23 of the Code of Federal Regulations, Part 772 (23 CFR Part 772), and will be provided by South Carolina Department of Transportation (SCDOT) to local officials in an attempt to prevent future impacts from traffic noise. The current SCDOT Traffic Noise Abatement Policy, dated September 2014, was followed to analyze the potential noise impacts and mitigation as necessary.
A. Proposed Project Description and Existing Facility

This project consists of widening Clements Ferry Road for approximately 4.5 miles from Jack Primus Road to SC 41 (Figure 1). The improvements involve widening the two-lane roadway to a four-lane roadway and adding a curb and gutter, a median, and multi-use path along one or both sides of the roadway per typical sections (Figure 2).
B. Existing Land Uses

Land use adjacent to Clements Ferry Road on the southern side is a mixture of residential and commercial, while the northern side is predominantly comprised of rural open land. There are three places of worship in the project area and a community center/museum. There is one industrial/commercial-retail land use in the project area.

## II. ANALYSIS METHODOLOGY

A. Model Used and Assumptions

Federal Highway Administration (FHWA) Traffic Noise Model (TNM 2.5) was used to derive existing and future noise levels. Traffic data was obtained from actual SCDOT vehicle counts and the traffic study entitled "Clements Ferry Road from Jack Primus Road to SC 41 Widening Study," prepared by Haselden and Associates in September 2017. Applicable model features, such as shared-use paths and sidewalks were added to the analysis to provide accurate sound level results.
B. Traffic Data

Traffic data (and design files) for the proposed project were provided by Infrastructure Consulting \& Engineering. The traffic report included the estimated Average Annual Daily Traffic (AADT) for the existing year (2015) and the design year (2040) and SCDOT's 2015 peak hour traffic counts that included fleet mix percentages. Design Hour Volume (DHV) percentages were derived from SCDOT's 2015 peak hour traffic counts and applied to the 2040 volumes (Appendix A). For the Build Alternative, 92-97 percent of the DHV was automobiles, pickup trucks and sport utility vehicles (SUV's). The percent of heavy duty trucks was 3-8 percent of the DHV. Although medium trucks were observed during field data collection, all truck were assumed to be heavy trucks since the SCDOT's actual traffic counts that showed all were heavy duty trucks. By assuming all the trucks to be heavy, the predicted noise represents the worst-case scenario.



February 12, 2018
Scale:
1 inch $=1$ miles Job No.: 18-001

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Figure


Figure 2: Typical Section


TYPICAL SECTION FROM JACK PRIMUS ROAD TO POINT HOPE PARKWAY


TYPICAL SECTION FROM POINT HOPE PARKAY TO PENINSULA COVE DRIVE


TYPICAL SECTION FROM PENINSULA COVE DRIVE TO SC 41

Appendix A identifies the fleet mix and speed limit for each segment along Clements Ferry Road. In addition, a 50/50 directional split, 12 -foot travel lanes, and outside shoulders were used for all scenarios.
C. Receiver Locations

Sensitive receivers and/or land use types were first identified using aerial photography and street level views from http://maps.google.com, then field verified. Exterior usage receiver categories that are potentially impacted by the proposed project include FHWA-developed Noise Abatement Criteria (NAC) categories B, C, D, E, and F (refer to Table 1).

Based on aerial photography and a field visits, four (4) locations were further evaluated for potentially sensitive receivers. These locations were undeveloped areas that had recently been cleared for development. Information from the City of Charleston and Berkeley County was obtained on January 25, 2018 and used to determine if any building permits had been issued in these undeveloped areas. If building permits had been issued, the sites were included as receivers in the noise model, per23 CFR §772.11(b)(vii)(A). Sixteen (16) undeveloped residential lots at the Cove at Martin's Creek were included in the traffic noise model (Figure 3). A future mixed-use development at Point Hope Parkway was also included in the traffic noise model based on the approved building permit. Cainhoy Village, a residential development along Cainhoy Village Road, was not included because building permits have not been approved. Thirty-two (32) residential receivers were added to the traffic noise model at the Oak Bluff development that is now under construction (Figure 3).
D. Field Measurements

Ambient noise field measurements were taken at 8 different locations along Clements Ferry Road (Figure 3). Noise measurements were taken during the weekday period between June $14^{\text {th }}$ and June 17, 2016 during the AM and/or PM peak traffic periods. These were performed in accordance with the FHWA publication "Measurement of Highway-related Noise."

Vehicles were counted and the type of vehicles were noted during the field measurements. Meteorological conditions and local features were noted for each site. Table 2 summarizes the information for the ambient noise field measurements and Appendix B contains the field measurement data sheets.
E. Model Validation

Using the ambient noise field measurements shown in Table 2, the TNM 2.5 model was validated per the requirements in 23 CFR $\S 772.11$ (d)(2). Leq is defined as the equivalent steady-state sound level which in a stated period of time contains the
same acoustic energy as the time-varying sound level during the same time period, with Leq(h) being the hourly value of Leq. Table 3 compares the measured Leq versus modeled Leq for the sites during the measurement period. Based on SCDOT Policy, if the measured and modeled Leq are within 3 dBA , the model is validated. Table 3 shows that the difference between the modeled and measured Leq, where applicable, was $\leq 3.0 \mathrm{dBA}$ at the sites; therefore, the model is validated.

| Activity Category | Leq (h) ${ }^{(1,2 \}$ | L10 (h) ${ }^{\text {11,2\} }$ | Evaluation Location | Description of Activity Category |
| :---: | :---: | :---: | :---: | :---: |
| A | 57 | 60 | Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. |
| $B^{\|3\|}$ | 67 | 70 | Exterior | Residential. |
| $\mathrm{C}^{131}$ | 67 | 70 | Exterior | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. |
| D | 52 | 55 | Interior | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios. |
| $E^{13 \mid}$ | 72 | 75 | Exterior | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. |
| F |  |  |  | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing. |
| G |  |  |  | Undeveloped lands that are not permitted. |
| $\backslash 2 \backslash$ The Leq( h ) and L10(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures. <br> $\backslash 3 \backslash$ Includes undeveloped lands permitted for this activity category. |  |  |  |  |



| Build 2040 Noise Impact Berkeley County, South Carolina |  |  |  | Date: <br> March 21, 2018 <br> Scale: <br> 1 inch $=500$ feet |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
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Figure


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Figure


Sheet 2 of 7


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Sheet 3 of 7


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Figure


Sheet 6 of 7


Build 2040 Noise Impacts
Berkeley County,
South Carolina
0

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| 18-001 |  |
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Figure
3
Sheet 7 of 7

| Location |  | Date | Time <br> Period (min) | Traffic Counts Data |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Northbound |  | Southbound |  |  |  |  |
|  |  | HT |  | MT | Auto | Bus | MC | HT | MT | Auto | Bus | MC |
| Keith Museum | A/B |  | 6/14/2016 | 30 | 35 | 7 | 218 | 0 | 0 | 47 | 12 | 232 | 0 | 1 |
| Captain Bill | A/B |  | 6/14/2016 | 10 | 17 | 4 | 130 | - | - | 13 | 18 | 114 | - | - |
|  |  | 10 |  | 10 | 6 | 124 | - | - | 15 | 7 | 112 | - | - |
|  |  | 10 |  | 14 | 5 | 146 | - | - | 8 | 5 | 124 | - | - |
|  |  | 30 |  | 41 | 15 | 400 | 0 | 0 | 36 | 30 | 350 | 0 | 0 |
| Tyler St | A/B | 6/14/2016 | 25 | 23 | 4 | 363 | 0 | 0 | 14 | 6 | 138 | 0 | 0 |
| St. Paul Baptist |  | 6/17/2016 | 30 | 35 | 11 | 250 | 0 | 2 | 35 | 6 | 227 | 0 | 0 |
| Bennington |  | 6/17/2016 | 20 | 3 | 6 | 100 | 0 | 2 | 4 | 3 | 104 | 0 | 1 |
| Notes: <br> MT - Medium Trucks HT - Heavy Trucks MC - Motorcycles |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Observations during field activities: <br> Excessive activity during Captain Bill traffic tally field work initiated professional to break count into ten minute segments. Free flowing traffic, but not full speed ( 45 mph ) |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 3: Comparison of Measured Leq to TNM 2.5 Modeled Leq

| Receptor | Measured <br> Leq | Modeled <br> Leq | Difference |
| :---: | ---: | ---: | ---: |
| Keith Museum A | 68.1 | 70.9 | -2.8 |
| Keith Museum B | 69.8 | 71.7 | -1.9 |
| Captain Bill B | 66.7 | 64.4 | 2.3 |
| Captain Bill A | 70.6 | 72.5 | -1.9 |
| St. Paul Church | 62.2 | 63.2 | -1 |
| Tyler St South A | 71.4 | 69.5 | 1.9 |
| Tyler St North B | 60.7 | 60.8 | -0.1 |
| Bennington Dr | 56.3 | 56.7 | -0.4 |

## III. TRAFFIC NOISE IMPACTS

The FHWA has developed noise abatement criteria and procedures in 23 CFR Part 772, as shown in Table 1, that states that traffic noise impacts occur when either:

1) the predicted traffic noise levels approach (within 1 dBA ) or exceed the FHWA NAC for the applicable activity category shown in Table 1; or,
2) the predicted traffic noise levels substantially exceed the existing noise levels by $\geq 15 \mathrm{dBA}$.

The TNM 2.5 model results for the existing condition, and the 2040 design year No-Build and Build Alternative can be found in Table 4. A total of 73 receivers would exceed the NAC threshold for the 2040 Build Alternative. No receivers would have a substantial increase impact for the 2040 Build Alternative.
A. Modeled and/or Measured Existing Year Noise Levels

In the existing condition (2015) there are 17 receivers that have noise levels that approach or exceed the NAC criteria for its respective land use. Thirteen (13) of the receivers are residential, three (3) are commercial, and one (1) is a museum/community center (Keith School Museum).
B. Modeled Design Year (2040) No-Build Alternative Noise Levels

There are 67 receivers that would have noise levels that approach or exceed the NAC criteria for its respective land use. Forty-five (45) of the receivers are residential, 21 are commercial, and one (1) is a museum/community center (Keith School Museum).
C. Modeled Design Year (2040) Build Alternative Noise Levels There are 73 receivers that would have noise levels that approach or exceed the NAC criteria for its respective land use. Forty-nine (49) of the receivers are residential, twenty-three (23) are commercial, and one (1) is a museum/ community center (Keith School Museum).

| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{gathered} 2040 \\ \text { No-Build } \end{gathered}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase <br> over <br> Existing | NAC Impact? | NAC | $\begin{aligned} & \text { Land } \\ & \text { Use } \end{aligned}$ |
| 1 | 48.0 | 54.3 | 54.0 | 6.0 | N | 66 | B |
| 2 | 51.6 | 57.9 | 57.2 | 5.6 | N | 66 | B |
| 3 | 53.0 | 59.2 | 58.1 | 5.1 | N | 66 | B |
| 4 | 46.3 | 52.5 | 52.3 | 6.0 | N | 66 | B |
| 5 | 49.9 | 56.2 | 55.6 | 5.7 | N | 66 | B |
| 6 | 51.4 | 57.6 | 56.6 | 5.2 | N | 66 | B |
| 7 | 47.9 | 54.2 | 54.1 | 6.2 | N | 66 | B |
| 8 | 51.6 | 57.9 | 57.3 | 5.7 | N | 66 | B |
| 9 | 53.0 | 59.3 | 58.2 | 5.2 | N | 66 | B |
| 10 | 49.8 | 56.1 | 56.0 | 6.2 | N | 66 | B |
| 11 | 50.6 | 56.9 | 56.7 | 6.1 | N | 66 | B |
| 12 | 52.5 | 58.8 | 58.7 | 6.2 | N | 66 | B |
| 13 | 53.9 | 60.2 | 60.0 | 6.1 | N | 66 | B |
| 14 | 70.0 | 76.2 | 75.1 | 5.1 | Y | 71 | E |
| 15 | 60.3 | 66.6 | 66.4 | 6.1 | N |  | F |
| 16 | 64.1 | 70.4 | 69.3 | 5.2 | N | 71 | E |
| 17 | 67.8 | 74.0 | 72.1 | 4.3 | Y | 71 | E |
| 18 | 66.9 | 73.2 | 71.3 | 4.4 | Y | 71 | E |
| 19 | 66.6 | 72.9 | 70.9 | 4.3 | N | 71 | E |
| 20 | 71.9 | 78.2 | 75.4 | 3.5 | Y | 71 | E |
| 21 | 71.1 | 77.4 | 74.6 | 3.5 | Y | 71 | E |
| 22 | 58.5 | 64.8 | 62.7 | 4.2 | N | 66 | B |
| 23 | 56.8 | 63.1 | 61.2 | 4.4 | N | 66 | B |
| 24 | 54.4 | 60.7 | 59.0 | 4.6 | N | 66 | B |
| 25 | 53.7 | 60.0 | 58.3 | 4.6 | N | 66 | B |
| 26 | 53.5 | 59.8 | 58.1 | 4.6 | N | 66 | B |
| 27 | 52.4 | 58.7 | 56.9 | 4.5 | N | 66 | B |
| 28 | 50.5 | 56.8 | 55.3 | 4.8 | N | 66 | B |
| 29 | 51.5 | 57.7 | 56.0 | 4.5 | N | 66 | B |
| 30 | 49.7 | 56.0 | 54.5 | 4.8 | N | 66 | B |
| 31 | 51.7 | 57.9 | 56.3 | 4.6 | N | 66 | B |
| 32 | 50.1 | 56.4 | 54.7 | 4.6 | N | 66 | B |
| 33 | 69.4 | 75.6 | 74.9 | 5.5 | Y | 71 | E |
| 34 | 68.9 | 75.2 | 71.7 | 2.8 | Y | 71 | E |
| 35 | 61.4 | 67.7 | 65.1 | 3.7 | N | 71 | E |
| 36 | 65.4 | 71.6 | 70.2 | 4.8 | Y | 66 | B |
| 37 | 54.8 | 61.1 | 60.5 | 5.7 | N | 66 | B |
| 38 | 59.8 | 66.0 | 65.3 | 5.5 | N | 66 | B |
| 39 | 63.6 | 69.8 | 67.7 | 4.1 | Y | 66 | B |
| 40 | 71.9 | 78.1 | 75.4 | 3.5 | Y | 66 | B |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{array}{\|c\|} \hline 2040 \\ \text { No-Build } \\ \hline \end{array}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase over Existing | NAC Impact? | NAC | $\begin{gathered} \text { Land } \\ \text { Use } \\ \hline \end{gathered}$ |
| 41 | 70.7 | 77.0 | 75.6 | 4.9 | Y | 66 | B |
| 42 | 72.6 | 78.8 | 75.4 | 2.8 | Y | 66 | B |
| 43 | 63.6 | 69.9 | 67.1 | 3.5 | Y | 66 | B |
| 44 | 62.3 | 68.6 | 66.1 | 3.8 | Y | 66 | B |
| 45 | 70.8 | 77.1 | 73.2 | 2.4 | Y | 66 | B |
| 46 | 71.2 | 77.5 | 80.1 | 8.9 | Y | 66 | B |
| 47 | 72.1 | 78.4 | 80.4 | 8.3 | Y | 66 | B |
| 48 | 72.2 | 78.5 | 79.9 | 7.7 | Y | 66 | B |
| 49 | 57.9 | 64.2 | 62.4 | 4.5 | N | 66 | B |
| 50 | 56.6 | 62.9 | 62.4 | 5.8 | N | 66 | B |
| 51 | 55.8 | 62.0 | 61.6 | 5.8 | N | 66 | B |
| 52 | 56.0 | 62.3 | 62.4 | 6.4 | N | 66 | B |
| 53 | 59.0 | 65.3 | 63.9 | 4.9 | N | 66 | B |
| 54 | 61.0 | 67.3 | 66.2 | 5.2 | Y | 66 | B |
| 55 | 56.9 | 63.1 | 62.0 | 5.1 | N | 66 | B |
| 56 | 57.3 | 63.5 | 63.0 | 5.7 | N | 66 | B |
| 57 | 61.6 | 67.9 | 67.1 | 5.5 | Y | 66 | B |
| 58 | 61.5 | 67.8 | 66.6 | 5.1 | Y | 66 | B |
| 59 | 57.2 | 63.5 | 63.2 | 6.0 | N | 66 | B |
| 60 | 57.0 | 63.2 | 62.0 | 5.0 | N | 66 | B |
| 61 | 60.8 | 67.1 | 66 | 5.2 | Y | 66 | B |
| 62 | 66.5 | 72.8 | 69 | 2.5 | Y | 66 | B |
| 63 | 70.1 | 76.4 | 72 | 1.9 | Y | 66 | B |
| 64 | 56.0 | 62.3 | 61.4 | 5.4 | N | 66 | B |
| 65 | 58.8 | 65.1 | 63.8 | 5.0 | N | 66 | B |
| 66 | 68.7 | 75.0 | 71 | 2.3 | Y | 66 | B |
| 67 | 55.0 | 61.3 | 60.4 | 5.4 | N | 66 | B |
| 68 | 65.8 | 72.1 | 68.6 | 2.8 | Y | 66 | B |
| 69 | 59.0 | 65.3 | 64.0 | 5.0 | N | 66 | B |
| 70 | 62.4 | 68.7 | 66.4 | 4.0 | Y | 66 | B |
| 71 | 74.7 | 81.0 | 77.5 | 2.8 | Y | 71 | E |
| 72 | 69.8 | 76.1 | 72.6 | 2.8 | Y | 71 | E |
| 73 | 70.7 | 76.9 | 76.3 | 5.6 | Y | 71 | E |
| 74 | 70.4 | 76.6 | 76.6 | 6.2 | Y | 71 | E |
| 75 | 59.3 | 65.6 | 64.5 | 5.2 | N | 71 | E |
| 76 | 53.0 | 59.3 | 59.1 | 6.1 | N | 71 | E |
| 77 | 49.4 | 55.7 | 55.5 | 6.1 | N | 66 | B |
| 78 | 53.7 | 60.0 | 58.5 | 4.8 | N | 66 | B |
| 79 | 55.2 | 61.5 | 59.7 | 4.5 | N | 66 | B |
| 80 | 47.0 | 53.3 | 53.3 | 6.3 | N | 66 | B |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{gathered} 2040 \\ \text { No-Build } \end{gathered}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase <br> over <br> Existing | NAC Impact? | NAC | $\begin{aligned} & \text { Land } \\ & \text { Use } \end{aligned}$ |
| 81 | 51.0 | 57.3 | 56.4 | 5.4 | N | 66 | B |
| 82 | 53.0 | 59.3 | 57.3 | 4.3 | N | 66 | B |
| 83 | 47.2 | 53.5 | 53.0 | 5.8 | N | 66 | B |
| 84 | 46.2 | 52.5 | 52.0 | 5.8 | N | 66 | B |
| 85 | 45.6 | 51.8 | 51.4 | 5.8 | N | 66 | B |
| 86 | 44.6 | 50.9 | 50.5 | 5.9 | N | 66 | B |
| 87 | 44.4 | 50.7 | 50.9 | 6.5 | N | 66 | B |
| 88 | 44.8 | 51.1 | 50.8 | 6.0 | N | 66 | B |
| 89 | 45.6 | 51.9 | 51.5 | 5.9 | N | 66 | B |
| 90 | 49.3 | 55.6 | 54.8 | 5.5 | N | 66 | B |
| 91 | 51.4 | 57.7 | 55.9 | 4.5 | N | 66 | B |
| 92 | 45.9 | 52.2 | 51.8 | 5.9 | N | 66 | B |
| 93 | 46.1 | 52.4 | 52.1 | 6.0 | N | 66 | B |
| 94 | 50.0 | 56.3 | 55.5 | 5.5 | N | 66 | B |
| 95 | 52.1 | 58.4 | 56.5 | 4.4 | N | 66 | B |
| 96 | 45.1 | 51.4 | 52.2 | 7.1 | N | 66 | B |
| 97 | 48.5 | 54.8 | 54.3 | 5.8 | N | 66 | B |
| 98 | 50.7 | 57.0 | 55.4 | 4.7 | N | 66 | B |
| 99 | 46.2 | 52.5 | 52.4 | 6.2 | N | 66 | B |
| 100 | 45.8 | 52.0 | 52.7 | 6.9 | N | 66 | B |
| 101 | 49.0 | 55.3 | 56.3 | 7.3 | N | 71 | E |
| 102 | 49.1 | 55.4 | 56.1 | 7.0 | N | 71 | E |
| 103 | 49.5 | 55.8 | 56.5 | 7.0 | N | 71 | E |
| 104 | 50.2 | 56.4 | 56.4 | 6.2 | N | 71 | E |
| 105 | 53.1 | 59.4 | 59.5 | 6.4 | N | 71 | E |
| 106 | 54.9 | 61.2 | 61.4 | 6.5 | N | 71 | E |
| 107 | 50.2 | 56.4 | 56.7 | 6.5 | N | 71 | E |
| 108 | 54.3 | 60.5 | 60.7 | 6.4 | N | 71 | E |
| 109 | 56.1 | 62.4 | 62.6 | 6.5 | N | 71 | E |
| 110 | 66.4 | 72.7 | 72.9 | 6.5 | Y | 71 | E |
| 111 | 67.7 | 74.0 | 74.2 | 6.5 | Y | 71 | E |
| 112 | 69.1 | 75.4 | 75.9 | 6.8 | Y | 71 | E |
| 113 | 69.0 | 75.2 | 75.9 | 6.9 | Y | 71 | E |
| 114 | 69.5 | 75.8 | 76.9 | 7.4 | Y | 71 | E |
| 115 | 44.3 | 50.5 | 52.5 | 8.2 | N | 66 | B |
| 116 | 43.9 | 50.2 | 52.1 | 8.2 | N | 66 | B |
| 117 | 44.4 | 50.7 | 52.7 | 8.3 | N | 66 | B |
| 118 | 44.8 | 51.1 | 53.1 | 8.3 | N | 66 | B |
| 119 | 44.9 | 51.2 | 53.0 | 8.1 | N | 66 | B |
| 120 | 45.0 | 51.3 | 54.9 | 9.9 | N | 66 | B |


| Receptor Number | Existing | $\begin{gathered} 2040 \\ \text { No-Build } \end{gathered}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase over Existing | NAC Impact? | NAC | $\begin{gathered} \text { Land } \\ \text { Use } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 121 | 45.3 | 51.6 | 53.5 | 8.2 | N | 66 | B |
| 122 | 45.1 | 51.3 | 53.2 | 8.1 | N | 66 | B |
| 123 | 44.8 | 51.1 | 53.0 | 8.2 | N | 66 | B |
| 124 | 44.6 | 50.9 | 53.0 | 8.4 | N | 66 | B |
| 125 | 44.5 | 50.8 | 52.8 | 8.3 | N | 66 | B |
| 126 | 44.5 | 50.7 | 53.0 | 8.5 | N | 66 | B |
| 127 | 44.4 | 50.6 | 52.8 | 8.4 | N | 66 | B |
| 128 | 44.3 | 50.6 | 52.7 | 8.4 | N | 66 | B |
| 129 | 44.2 | 50.5 | 52.6 | 8.4 | N | 66 | B |
| 130 | 49.4 | 55.7 | 57.8 | 8.4 | N | 66 | B |
| 131 | 72.6 | 78.9 | 77.3 | 4.7 | Y | 66 | B |
| 132 | 58.3 | 64.5 | 64.5 | 6.2 | N | 66 | C/D |
| 133 | 58.7 | 64.9 | 65.3 | 6.6 | N | 66 | B |
| 134 | 66.1 | 72.3 | 72 | 5.9 | Y | 66 | C/D |
| 135 | 50.5 | 56.8 | 57.7 | 7.2 | N | 66 | B |
| 136 | 47.9 | 54.1 | 54.2 | 6.3 | N | 66 | B |
| 137 | 50.9 | 57.2 | 57.9 | 7.0 | N | 66 | B |
| 138 | 49.1 | 55.3 | 55.9 | 6.8 | N | 66 | B |
| 139 | 50.8 | 57.1 | 57.8 | 7.0 | N | 66 | B |
| 140 | 48.9 | 55.2 | 55.8 | 6.9 | N | 66 | B |
| 141 | 50.8 | 57.0 | 57.8 | 7.0 | N | 66 | B |
| 142 | 48.9 | 55.1 | 55.8 | 6.9 | N | 66 | B |
| 143 | 48.1 | 54.4 | 55.1 | 7.0 | N | 66 | B |
| 144 | 50.8 | 57.0 | 58.1 | 7.3 | N | 66 | B |
| 145 | 51.3 | 57.5 | 58.6 | 7.3 | N | 66 | B |
| 146 | 49.1 | 55.3 | 56.4 | 7.3 | N | 66 | B |
| 146 | 51.3 | 57.5 | 58.6 | 7.3 | N | 66 | B |
| 148 | 48.5 | 54.7 | 55.8 | 7.3 | N | 66 | B |
| 149 | 50.7 | 56.9 | 58.0 | 7.3 | N | 66 | B |
| 150 | 49.5 | 55.7 | 56.6 | 7.1 | N | 66 | B |
| 151 | 48.0 | 54.2 | 54.9 | 6.9 | N | 66 | B |
| 152 | 47.2 | 53.4 | 54.1 | 6.9 | N | 66 | B |
| 153 | 44.9 | 51.1 | 52.0 | 7.1 | N | 66 | B |
| 154 | 44.6 | 50.9 | 51.6 | 7.0 | N | 66 | B |
| 155 | 45.1 | 51.4 | 52.2 | 7.1 | N | 66 | B |
| 156 | 45.2 | 51.5 | 52.3 | 7.1 | N | 66 | B |
| 157 | 45.1 | 51.4 | 51.9 | 6.8 | N | 66 | B |
| 158 | 47.5 | 53.7 | 54.6 | 7.1 | N | 66 | B |
| 159 | 47.3 | 53.6 | 54.2 | 6.9 | N | 66 | B |
| 160 | 47.0 | 53.3 | 54.0 | 7.0 | N | 66 | B |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{gathered} 2040 \\ \text { No-Build } \end{gathered}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase over Existing | NAC Impact? | NAC | $\begin{aligned} & \text { Land } \\ & \text { Use } \end{aligned}$ |
| 161 | 49.3 | 55.6 | 56.5 | 7.2 | N | 66 | B |
| 162 | 49.3 | 55.6 | 56.5 | 7.2 | N | 66 | B |
| 163 | 48.4 | 54.6 | 55.5 | 7.1 | N | 66 | B |
| 164 | 51.3 | 57.5 | 58.6 | 7.3 | N | 66 | B |
| 165 | 51.6 | 57.8 | 58.9 | 7.3 | N | 66 | B |
| 166 | 51.6 | 57.9 | 59.0 | 7.4 | N | 66 | B |
| 167 | 51.3 | 57.5 | 58.8 | 7.5 | N | 66 | B |
| 168 | 51.3 | 57.5 | 58.8 | 7.5 | N | 66 | B |
| 169 | 51.7 | 58.0 | 59.2 | 7.5 | N | 66 | B |
| 170 | 51.8 | 58.1 | 59.3 | 7.5 | N | 66 | B |
| 171 | 65.1 | 71.3 | 72.5 | 7.4 | Y | 66 | B |
| 172 | 62.8 | 69.0 | 69.6 | 6.8 | Y | 66 | B |
| 173 | 59.8 | 66.0 | 66.7 | 6.9 | Y | 66 | B |
| 174 | 58.7 | 64.9 | 66.0 | 7.3 | Y | 66 | B |
| 175 | 56.2 | 62.5 | 63.9 | 7.7 | N | 66 | B |
| 176 | 54.9 | 61.2 | 62.8 | 7.9 | N | 66 | B |
| 177 | 54.2 | 60.4 | 62.1 | 7.9 | N | 66 | B |
| 178 | 53.5 | 59.7 | 61.4 | 7.9 | N | 66 | B |
| 179 | 52.7 | 58.9 | 60.5 | 7.8 | N | 66 | B |
| 180 | 51.9 | 58.1 | 59.6 | 7.7 | N | 66 | B |
| 181 | 51.1 | 57.3 | 58.8 | 7.7 | N | 66 | B |
| 182 | 50.5 | 56.7 | 58.2 | 7.7 | N | 66 | B |
| 183 | 49.9 | 56.1 | 57.5 | 7.6 | N | 66 | B |
| 184 | 49.2 | 55.4 | 56.7 | 7.5 | N | 66 | B |
| 185 | 48.6 | 54.8 | 56.0 | 7.4 | N | 66 | B |
| 186 | 48.2 | 54.4 | 55.6 | 7.4 | N | 66 | B |
| 187 | 47.8 | 54.0 | 55.1 | 7.3 | N | 66 | B |
| 188 | 47.5 | 53.7 | 54.8 | 7.3 | N | 66 | B |
| 189 | 50.2 | 56.5 | 58.0 | 7.8 | N | 66 | B |
| 190 | 50.9 | 57.2 | 58.7 | 7.8 | N | 66 | B |
| 191 | 51.9 | 58.1 | 59.8 | 7.9 | N | 66 | B |
| 192 | 52.6 | 58.8 | 60.5 | 7.9 | N | 66 | B |
| 193 | 53.1 | 59.4 | 61.1 | 8.0 | N | 66 | B |
| 194 | 53.9 | 60.2 | 62.0 | 8.1 | N | 66 | B |
| 195 | 54.7 | 61.0 | 62.9 | 8.2 | N | 66 | B |
| 196 | 55.6 | 61.9 | 63.7 | 8.1 | N | 66 | B |
| 197 | 56.7 | 63.0 | 64.6 | 7.9 | N | 66 | B |
| 198 | 58.0 | 64.2 | 65.8 | 7.8 | N | 66 | B |
| 199 | 65.1 | 71.4 | 73.6 | 8.5 | Y | 66 | B |
| 200 | 64.6 | 70.9 | 73.5 | 8.9 | Y | 66 | B |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{array}{\|c\|} \hline 2040 \\ \text { No-Build } \\ \hline \end{array}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase over Existing | NAC Impact? | NAC | $\begin{gathered} \text { Land } \\ \text { Use } \\ \hline \end{gathered}$ |
| 201 | 64.4 | 70.6 | 73.4 | 9.0 | Y | 66 | B |
| 202 | 63.9 | 70.1 | 72.8 | 8.9 | Y | 66 | B |
| 203 | 63.4 | 69.6 | 71.1 | 7.7 | Y | 66 | B |
| 204 | 59.0 | 65.2 | 66.6 | 7.6 | Y | 66 | B |
| 205 | 57.7 | 63.9 | 65.2 | 7.5 | N | 66 | B |
| 206 | 53.3 | 59.5 | 61.2 | 7.9 | N | 66 | B |
| 207 | 50.9 | 57.2 | 58.8 | 7.9 | N | 66 | B |
| 208 | 46.5 | 52.8 | 53.9 | 7.4 | N | 66 | B |
| 209 | 46.5 | 52.8 | 54.1 | 7.6 | N | 66 | B |
| 210 | 45.8 | 52.1 | 53.2 | 7.4 | N | 66 | B |
| 211 | 49.2 | 55.5 | 57.0 | 7.8 | N | 66 | B |
| 212 | 48.5 | 54.8 | 56.2 | 7.7 | N | 66 | B |
| 213 | 49.2 | 55.5 | 57.1 | 7.9 | N | 66 | C/D |
| 214 | 51.0 | 57.3 | 59.0 | 8.0 | N | 66 | B |
| 215 | 51.9 | 58.2 | 59.9 | 8.0 | N | 66 | B |
| 216 | 58.7 | 65.0 | 66.2 | 7.5 | Y | 66 | B |
| 217 | 57.3 | 63.6 | 64.8 | 7.5 | N | 66 | B |
| 218 | 61.2 | 67.6 | 68.8 | 7.6 | N | 71 | E |
| 219 | 71.3 | 77.6 | 77.1 | 5.8 | Y | 66 | B |
| 220 | 62.1 | 68.3 | 68.7 | 6.6 | Y | 66 | B |
| 221 | 61.5 | 67.8 | 68.4 | 6.9 | Y | 66 | B |
| 222 | 64.1 | 70.4 | 72.0 | 7.9 | Y | 71 | E |
| 223 | 62.4 | 68.7 | 69.9 | 7.5 | N | 71 | E |
| 224 | 69.1 | 75.5 | 76.4 | 7.3 | Y | 71 | E |
| 225 | 68.5 | 74.9 | 77.8 | 9.3 | Y | 71 | E |
| 226 | 63.5 | 69.8 | 71.3 | 7.8 | Y | 71 | E |
| 227 | 50.9 | 57.2 | 58.4 | 7.5 | N | 66 | B |
| 228 | 46.4 | 52.7 | 53.6 | 7.2 | N | 71 | E |
| 229 | 45.1 | 51.4 | 52.0 | 6.9 | N | 66 | B |
| 230 | 45.2 | 51.5 | 52.2 | 7.0 | N | 66 | B |
| 231 | 44.8 | 51.1 | 51.8 | 7.0 | N | 66 | B |
| 232 | 50.0 | 56.3 | 58.8 | 8.8 | N | 66 | B |
| 233 | 50.0 | 56.4 | 58.8 | 8.8 | N | 66 | B |
| 234 | 52.7 | 59.1 | 61.8 | 9.1 | N | 66 | B |
| 235 | 57.8 | 64.2 | 66.5 | 8.7 | Y | 66 | B |
| 236 | 66.7 | 73.1 | 75.3 | 8.6 | Y | 66 | B |
| 237 | 51.6 | 58.1 | 60.6 | 9.0 | N | 66 | B |
| 238 | 49.8 | 56.2 | 58.2 | 8.4 | N | 66 | B |
| 239 | 65.0 | 71.3 | 74.4 | 9.4 | Y | 66 | B |
| 240 | 62.8 | 69.2 | 72.1 | 9.3 | Y | 71 | E |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor Number | Existing | $\begin{gathered} 2040 \\ \text { No-Build } \end{gathered}$ | $\begin{aligned} & 2040 \\ & \text { Build } \end{aligned}$ | Increase over Existing | NAC Impact? | NAC | $\begin{aligned} & \text { Land } \\ & \text { Use } \end{aligned}$ |
| 241 | 49.5 | 55.9 | 58.3 | 8.8 | N | 66 | B |
| 242 | 52.6 | 59.1 | 62.5 | 9.9 | N | 66 | B |
| 243 | 48.9 | 55.3 | 57.8 | 8.9 | N | 66 | B |
| 244 | 45.4 | 52.0 | 53.6 | 8.2 | N | 66 | B |
| 245 | 43.9 | 50.6 | 52.0 | 8.1 | N | 66 | B |
| 246 | 45.0 | 51.6 | 53.2 | 8.2 | N | 66 | B |
| 247 | 46.5 | 53.1 | 55.1 | 8.6 | N | 66 | B |
| 248 | 48.0 | 54.6 | 57.0 | 9.0 | N | 66 | B |
| 249 | 50.6 | 57.2 | 60.1 | 9.5 | N | 66 | B |
| 250 | 53.3 | 59.9 | 63.1 | 9.8 | N | 66 | B |
| 251 | 63.6 | 70.1 | 72.3 | 8.7 | Y | 66 | B |
| 252 | 59.9 | 67.0 | 69.7 | 9.8 | Y | 66 | B |
| 253 | 50.1 | 56.9 | 59.9 | 9.8 | N | 66 | B |
| 254 | 45.6 | 52.4 | 54.2 | 8.6 | N | 66 | B |
| 255 | 45.4 | 52.3 | 54.1 | 8.7 | N | 66 | B |
| 256 | 46.7 | 53.8 | 55.9 | 9.2 | N | 66 | B |
| 257 | 47.7 | 54.9 | 56.8 | 9.1 | N | 66 | B |
| 258 | 48.4 | 55.6 | 58.0 | 9.6 | N | 66 | B |
| 259 | 53.2 | 60.4 | 63.4 | 10.2 | N | 66 | B |
| 260 | 49.2 | 56.3 | 59.3 | 10.1 | N | 66 | B |
| 261 | 49.7 | 56.7 | 59.8 | 10.1 | N | 66 | B |
| 262 | 49.2 | 56.2 | 59.1 | 9.9 | N | 66 | B |
| 263 | 61.7 | 68.9 | 72 | 10.3 | Y | 66 | B |
| 264 | 63.0 | 70.1 | 72.5 | 9.5 | Y | 66 | B |
| 265 | 63.7 | 70.8 | 73.8 | 10.1 | Y | 66 | B |
| 266 | 54.0 | 61.0 | 63.7 | 9.7 | N | 71 | E |
| 267 | 50.0 | 57.0 | 60.1 | 10.1 | N | 66 | C/D |
| 268 | 62.3 | 69.6 | 72.6 | 10.3 | Y | 66 | B |
| 269 | 54.3 | 61.4 | 63.9 | 9.6 | N | 66 | B |
| 270 | 47.6 | 54.7 | 57.8 | 10.2 | N | 66 | B |
| 271 | 45.9 | 52.9 | 55.7 | 9.8 | N | 66 | B |
| 272 | 44.0 | 50.9 | 53.3 | 9.3 | N | 66 | B |
| 273 | 42.7 | 49.6 | 51.8 | 9.1 | N | 66 | B |
| 274 | 41.9 | 48.7 | 50.6 | 8.7 | N | 66 | B |
| 275 | 43.0 | 49.9 | 52.1 | 9.1 | N | 66 | B |
| 276 | 42.0 | 48.9 | 51.1 | 9.1 | N | 66 | B |
| 277 | 41.3 | 48.2 | 50.1 | 8.8 | N | 66 | B |
| 278 | 41.3 | 48.2 | 50.3 | 9.0 | N | 66 | B |
| 279 | 41.9 | 48.8 | 50.8 | 8.9 | N | 66 | B |
| 280 | 41.9 | 48.7 | 51.0 | 9.1 | N | 66 | B |


| Table 4: Existing and Design Year Sound Levels |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receptor <br> Number | Existing | 2040 <br> No-Build | 2040 <br> Build | over <br> Existing | NAC <br> Impact? | NAC | Land <br> Use |
| 281 | 42.9 | 49.9 | 52.3 | 9.4 | N | 66 | B |
| 282 | 43.9 | 50.8 | 53.5 | 9.6 | N | 66 | B |
| 283 | 45.8 | 52.8 | 55.7 | 9.9 | N | 66 | B |
| 284 | 46.9 | 54.0 | 57.0 | 10.1 | N | 66 | B |
| 285 | 44.2 | 51.3 | 53.9 | 9.7 | N | 66 | B |
| 286 | 46.0 | 53.0 | 56.0 | 10.0 | N | 66 | B |
| 287 | 48.1 | 55.2 | 58.4 | 10.3 | N | 66 | B |
| 288 | 54.7 | 61.9 | 64.3 | 9.6 | N | 66 | B |
| 289 | 61.9 | 69.1 | 72 | 10.1 | Y | 66 | B |
| 290 | 58.0 | 65.3 | 67.1 | 9.1 | Y | 66 | B |
| 291 | 63.5 | 70.7 | 74.2 | 10.7 | Y | 71 | E |
| 292 | 61.7 | 69.0 | 71.7 | 10.0 | Y | 71 | E |
| 293 | 61.3 | 68.5 | 71.2 | 9.9 | Y | 66 | B |
| 294 | 60.3 | 67.6 | 68.7 | 8.4 | N | 71 | E |
| 295 | 64.5 | 71.7 | 70.6 | 6.1 | N | 71 | E |
| 296 | 60.1 | 67.3 | 66.5 | 6.4 | Y | 66 | B |
| 297 | 67.4 | 74.6 | 70.2 | 2.8 | N | 71 | E |
| 298 | 63.9 | 71.1 | 67.9 | 4.0 | Y | 66 | B |

## IV. FEASIBLE AND RESONABLE CONSIDERATION OF ABATEMENT

Since there are receivers that would be impacted by the noise from the Design Year Build Alternative, abatement measures were considered for the proposed project.

When considering noise abatement measures, primary consideration shall be given to exterior areas where frequent human use occurs. Since South Carolina is not part of the FHWA-approved Quiet Pavement Pilot Program, the use of quieter pavements was not considered as an abatement measure for the proposed project. In addition, the planting of vegetation or landscaping was also not considered as a potential abatement measure, since it is not an acceptable Federal-aid noise abatement measure due to the fact that only dense stands of evergreen vegetation planted 100 feet deep will reduce noise levels. In accordance with 23 CFR §772.13(c), the following measures were considered and evaluated as a means to reduce or eliminate the traffic noise impacts:
A. Acquisition of Right-of-Way - The acquisition of rights-of-way to mitigate the noise levels at the affected site would result in disruptive relocations.
B. Traffic Management - Measures such as exclusive lane designations and signing for prohibition of certain vehicle type would prevent the project from serving its intended purpose, such as moving people, goods and services.
C. Alteration of Horizontal and Vertical Alignments - Alignment modifications as a means of noise abatement would result in disruptive relocations for this project and would not be cost effective.
D. Acquisition of real property or interests therein (predominately unimproved property) to serve as a buffer zone to preempt development - Adequate property is not available to create an effective buffer zone between the proposed roadway and the impacted receivers.
E. Noise Barriers

Among the most common noise barriers are earthen berms and freestanding walls. The optimum situation for the use of free-standing noise barriers is when a dense concentration of impacted receivers lies directly adjacent to and parallel with the highway right-of-way. In these instances, one barrier can protect many people at a relatively low cost per impacted site. For this study, an earthen berm was ruled out since there is not enough room for proper sloping. Drainage and safety line-of-sight may also be an issue. Based on the need for a barrier to be continuous and to protect a dense concentration of receivers, it is typically not considered reasonable to provide abatement for single impacted receivers or on non-controlled access facilities where access and safety requirements would impact barrier placement. Clements Ferry Road is a non-controlled access facility.

When considering abatement, the SCDOT Noise Policy Guidelines state that noise abatement measures must be both feasible and reasonable. The feasibility and reasonableness of a noise barrier is determined by the following factors for Feasibility and Reasonableness.

## 1. Feasibility:

There are two mandatory feasibility factors that must be met for a noise abatement measure to be considered reasonable. The two mandatory factors must collectively be achieved in order for a noise abatement measure to be deemed reasonable. Failure to achieve any one of the factors will result in the noise abatement measure being deemed not feasible.
a. Acoustic Feasibility - It is SCDOT's policy that a noise reduction of at least 5 dBA must be achieved for at least 75 percent of impacted receivers for the noise abatement measure to be acoustically feasible. If this goal is not met, then abatement is determined not to be feasible and no further analysis is required.
b. Engineering Feasibility - Feasibility also includes engineering considerations. The ability to achieve noise reduction may be limited by engineering considerations such as the topographical features of the area, safety, drainage, utilities, maintenance and access. In addition, due to constructability constraints, the height of the noise abatement measure cannot exceed 25 feet.

## 2. Reasonableness:

There are three mandatory reasonable factors that must be met for a noise abatement measure to be considered reasonable. The three mandatory reasonable factors must collectively be achieved in order for a noise abatement measure to be deemed reasonable. Failure to achieve any one of the reasonable factors will result in the noise abatement measure being deemed not reasonable.
a. Noise Reduction Design Goal - It is SCDOT's policy that a noise reduction of at least 8 dBA must be achieved for $80 \%$ of those receivers determined to be in the first two building rows and considered benefited. Please note that the first two building rows will only be applicable if they are within 500 feet from the edge of pavement noise source. If the design goal is not met, then abatement is determined not to be reasonable and no further analysis is required.
b. Cost Effectiveness - The allowable cost of the abatement will be based on \$35.00 per square foot. This allowable cost is based on actual construction costs on recent SCDOT projects. This construction cost will be divided by the number of benefited receivers. If the cost per benefited receiver is less than $\$ 30,000$ then the barrier is determined to be cost effective.
c. Viewpoints of the Property Owners and Residents of the Benefited Receivers - If the noise reduction design goal and cost effective criteria are met, SCDOT shall solicit the viewpoints of all of the benefited receivers and document a decision on either desiring or not desiring the noise abatement measure. The viewpoints will be solicited as part of the public involvement process through a voting procedure if a barrier is proposed. The voting ballot will explain that the noise abatement shall be constructed unless a majority (greater than $50 \%$ of the benefited receivers) of votes not desiring noise abatement is received. For non-owner occupied benefited receivers, both the property owner and the renter may vote on whether the noise abatement is desired.

For this noise analysis, the mitigation analysis determined that all the barriers either did not meet the design goal or the cost effectiveness criteria. Therefore, the voting process of the benefited property owners is not applicable.

Table 5 includes a summary of the barrier evaluations and the SCDOT Feasible and Reasonable Worksheets are located in Appendix C.

Overall, as a result of the mitigation analysis, there were no feasible and reasonable solutions to mitigate for the predicted noise impacts according to the SCDOT noise policy. Therefore, there are no noise barriers proposed to be carried forward to the construction phase.

Table 5: Barrier Evaluation Summary

| Barrier | Receiver <br> Number | Acoustically Feasible? (Y/N) | Engineering Feasibility? (Y/N) | Overall Feasible? (Y/N) | Meets Noise Reduction Goal? (Y/N) | Is Barrier Cost Effectiveness? (Y/N) | Overall Reasonable? (Y/N) | Conclusion |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B1 | 14 | Y | Y | Y | Y | N | N | Feasible, but not reasonable |
| B2 | 17 | Y | Y | Y | Y | N | N | Feasible, but not reasonable |
| B3 | 18 | N | N | N | N | -- | N | Not feasible or reasonable |
| B4 | 20 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B5 | 21 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| $\begin{gathered} \text { B6-A \& } \\ \text { B6-B } \end{gathered}$ | $\begin{gathered} 33,36 \\ 39 \\ \hline \end{gathered}$ | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B7 | 34 | N | N | N | N | -- | N | Not feasible or reasonable |
| B8 | 40 | N | N | N | N | -- | N | Not feasible or reasonable |
| B9 | $\begin{aligned} & \hline 41,46 \\ & 47,48 \\ & 54,57 \\ & 58,61 \\ & \hline \end{aligned}$ | Y | Y | Y | N | -- | N | Feasible, but not reasonable |
| B10 | 42,43 | N | N | N | N | -- | N | Not feasible or reasonable |
| B11 | 44,45 | N | N | N | N | -- | N | Not feasible or reasonable |
| B12 | 62,63 | N | N | N | N | -- | N | Not feasible or reasonable |
| B13 | 66 | N | N | N | N | -- | N | Not feasible or reasonable |
| B14 | 68 | N | N | N | N | -- | N | Not feasible or reasonable |
| B15 | 70 | N | N | N | N | -- | N | Not feasible or reasonable |
| B16 | 71 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B17 | 72 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B18 | 73,74 | Y | Y | Y | Y | N | N | Feasible, but not reasonable |
| B19 | $\begin{gathered} \hline 110,111 \\ 112,113 \\ 114 \\ \hline \end{gathered}$ | Y | Y | Y | Y | N | N | Feasible, but not reasonable |
| B20 | 131 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B21 | 134 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B22 | $\begin{aligned} & 171,172 \\ & 173,174 \end{aligned}$ | N | N | N | Y | N | N | Not feasible or reasonable |


|  | Table 5: Barrier Evaluation Summary |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Barrier |  | Acoustically Feasible? (Y/N) | Engineering Feasibility? (Y/N) | Overall Feasible? $(\mathrm{Y} / \mathrm{N})$ | Meets Noise Reduction Goal? (Y/N) | Is Barrier Cost Effectiveness? (Y/N) | $\begin{gathered} \text { Overall } \\ \text { Reasonable? } \\ (\mathrm{Y} / \mathrm{N}) \\ \hline \end{gathered}$ | Conclusion |
| B23 | $\begin{aligned} & 199,200 \\ & 201,202 \end{aligned}$ | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B24 | 203,204 | N | Y | N | N | -- | N | Not feasible or reasonable |
| B25 | $\begin{aligned} & \hline 219,220 \\ & 221,222 \\ & \hline \end{aligned}$ | N | N | N | Y | -- | N | Not feasible or reasonable |
| B26 | 224 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B27 | 225 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B28 | 235,236 | N | N | N | N | -- | N | Not feasible or reasonable |
| B29 | 239 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B30 | 251 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B31 | $\begin{gathered} \hline 252,263 \\ 290 \\ \hline \end{gathered}$ | Y | Y | Y | Y | N | N | Feasible, but not reasonable |
| B32 | 264 | N | N | N | N | -- | N | Not feasible or reasonable |
| B33 | 265 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B34 | 268 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B35 | 289 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B36 | 291 | Y | N | Y | Y | N | N | Feasible, but not reasonable |
| B37 | 293 | N | N | N | N | -- | N | Not feasible or reasonable |
| B38 | 216 | N | N | N | N | -- | N | Not feasible or reasonable |
| B39 | 226 | Y | N | Y | N | -- | N | Feasible, but not reasonable |
| B40 | 240 | N | N | N | N | -- | N | Not feasible or reasonable |
| B41 | 292 | N | N | N | N | -- | N | Not feasible or reasonable |
| B42 | 296 | N | N | N | N | -- | N | Not feasible or reasonable |
| B43 | 298 | N | N | N | N | -- | N | Not feasible or reasonable |

F. Noise Insulation of Public Use or Institutional Structures - The Keith School Museum (Receiver 134) is a NAC C with the exterior noise level for the 2040 Build scenario of 72 dBA. A barrier analysis (Barrier 21) determined that the barrier would be feasible but would not achieve the 8 dBA noise reduction design goal to
be reasonable. When a receiver that is defined as a NAC C may have interior use, it is further classified as a NAC D. The SCDOT Traffic Noise Abatement Policy states that "a highway agency shall conduct an indoor analysis only after a determination is made that exterior abatement measures will not be feasible and reasonable." Per the policy, a 25 dBA noise reduction was applied because the building is a light frame with storm windows. The resulting 47.1 dBA value is below the NAC criteria of 52 dBA for the interior use. Based on this, noise insulation for the Keith School Museum is not recommended.

## V. FINDINGS AND RECOMMENDATIONS

Overall, there were 73 receivers impacted in the project study area for the 2040 Design Year Build Alternative condition. As a result, mitigation analysis was warranted according to the SCDOT Traffic Noise Abatement Policy. None of the barrier analyses results met both of the feasible and reasonable criteria as per the SCDOT Traffic Noise Abatement Policy.

## VI. CONSTRUCTION NOISE

If the Build Alternative is chosen, temporary increases in noise levels would occur during the time period that construction takes place. Noise levels due to construction, although temporary, can impact areas adjacent to the project. The major noise sources from construction would be the heavy equipment operated at the site. However, other construction site noise sources would include hand tools and trucks supplying and removing materials

Typical noise levels generated by different types of construction equipment are presented in Table 6. Construction operations are typically broken down into several phases including clearing and grubbing, earthwork, erection, paving and finishing. Although these phases can overlap, each has their own noise characteristics and objective.

SCDOT's "2007 Standard Specifications for Highway Construction" includes various references to construction noise, including Sections 107.6-paragraph 3, 606.3.1.6.3paragraph 1, 607.3.1.6.3-paragraph 1, 607.3.2.6.3-paragraph 1, and 702.4.15-paragraph 3. The SCDOT specifications cited above are generalized for nuisance noise avoidance. Detailed specifications suggested for consideration for inclusion in the proposed project's construction documents may consist of the following:

- Construction equipment powered by an internal combustion engine shall be equipped with a properly maintained muffler.
- Air compressors shall meet current USEPA noise emission exhaust standards.
- Air powered equipment shall be fitted with pneumatic exhaust silencers.

Table 6: Leq Noise Level (dBA) at 50 Feet for Construction

## Equipment

## Equipment

dBA Leq @ 50 feet
Earth Moving:
Back Hoe 85

| Dozer | 80 |
| :--- | :--- |


| Tractor | 80 |
| :--- | :--- |


| Scraper | 88 |
| :--- | :--- |


| Grader | 85 |
| :--- | :--- |


| Truck | 91 |
| :--- | :--- |
| Paver | 89 |

Materials Handling:

| Concrete Mixer | 85 |
| :--- | :--- |


| Concrete Pump 82 |
| :--- | :--- |


| Crane 83 |
| :--- | ---: |


| Derrick | 88 |
| :--- | :--- |


| Stationary: |  |
| :--- | :---: |
| Pump | 76 |
| Generator | 78 |
| Compressor | 81 |
| Impact: |  |
| Pile Driver | 100 |
| Jackhammer | 88 |
| Rock Drill | 98 |
| Other: |  |
| Saw | 78 |
| Vibrator | 76 |

SOURCE: Grant, Charles A. and Reagan, Jerry, A., Highway Construction Noise: Measurement, Prediction and Mitigation

- Stationary equipment powered by an internal combustion engine shall not be operated within 150 feet of noise sensitive areas without portable noise barriers placed between the equipment and noise sensitive sites. Noise sensitive sites include residential buildings, motels, hotels, schools, churches, hospitals, nursing homes, libraries and public recreation areas.
- Portable noise barriers shall be constructed of plywood or tongue and groove boards with a noise absorbent treatment on the interior surface (facing the equipment).
- Powered construction equipment shall not be operated during the traditional evening and/or sleeping hours within 150 feet of a noise sensitive site, to be decided either by local ordinances and/or agreement with the SCDOT.


## VII. COORDINATION WITH LOCAL OFFICIALS

SCDOT has no authority over local land use planning and development. SCDOT can only encourage local officials and developers to consider highway traffic noise in the planning, zoning and development of property near existing and proposed highway corridors. The lack of consideration of highway traffic noise in land use planning at the local level has added to the highway traffic noise problem which will continue to grow as development continues adjacent to major highway long after these highways were proposed and/or constructed.

In order to help local officials and developers consider highway traffic noise in the vicinity of proposed Type I project, SCDOT will inform them of the predicted future noise levels and the required distance from such projects needed to ensure that noise levels remain below the NAC for each type of land use per 23 CFR $\S 772.17$. The contour distances to the 66 and 71 dBA sound levels are shown in Table 7. Please note that the values in the table do not represent predicted levels at every location at a particular distance back from the roadway. Sound levels will vary with changes in terrain and will be affected by the shielding of objects such as buildings.

| Table 7: Contour Distances (dBA) for Clements Ferry Road Phase 2 |  |  |
| :---: | :---: | :---: |
| NAC Land Use | Impact Contour | Worst-Case Approximate <br> Distance from Nearest <br> Edge of Travel Lane |
| Category B \& C <br> (Residential, outdoor <br> recreation facilities, <br> churches, schools, <br> hospitals, etc. | 66 dBA | 193 Feet |
| Category E <br> (Hotels, motels, offices, <br> restaurants/bars, and other <br> developments/activites not <br> included in the other <br> NAC's) | 71 dBA |  |
| SOURCE: Three Oaks Engineering, March, 2018 |  |  |

# APPENDIX A 

## Traffic Data

## TNM Traffic Data - Clements Ferry Phase 2

EXISTING YEAR 2015


Source: Clements Ferry Road from Jack Primus Road to SC 41 Widening Study, Haselden and Associates (September 7, 2017).

BUILD - DESIGN YEAR 2040

| AADT | Jack Primus Road to Nellefield 58,273 |  | Nellefield Creek Drive to 58,273 |  | Cainhoy Road to Reflectance$57,283$ |  | Reflectance Road to SC 41 51,713 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DHV Factor | 11.28\% |  | 10.44\% |  | 12.03\% |  | 13.19\% |  |
| Peak | 6,573 |  | 6,084 |  | 6,891 |  | 6,821 |  |
| Speed | 45 mph |  | 45 mph |  | 45 mph 4 lanes @ 12 feet |  | 45 mph |  |
| Lane Width | 4 lanes @ 12 feet |  | $\begin{gathered} 4 \text { lanes @ } 12 \text { feet } \\ 50 / 50 \end{gathered}$ |  | 4 lanes 50 | 50/50 | 4 lanes 50 | 12 feet <br> 50 |
| Vehicle Mix | 92\% Autos +8\% Heavy Trucks |  | 92\% Autos +8\% Heavy Trucks |  | 93\% Autos + 7\% Heavy Trucks |  | 97\% Autos +3\% Heavy Trucks |  |
|  | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) |
| Autos | 1,512 | 1,512 | 1,399 | 1,399 | 1,602 | 1,602 | 1,654 | 1,654 |
| Heavy Trucks | 131 | 131 | 122 | 122 | 121 | 121 | 51 | 51 |

CHATS 2\% growth rate was used for year 2040.
Source: Clements Ferry Road from Jack Primus Road to SC 41 Widening Study, Haselden and Associates (September 7, 2017).

| 3,287 | 6573.1944 | 3,042 | 6083.7012 | 3,446 | 6891.1449 | 3,410 | 6820.9447 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

NO BUILD - DESIGN YEAR 2040

| AADT | Jack Primus Road to Nellefield$58,273$ |  | $58,273$ | ek Drive to | Cainhoy Road to Reflectance |  | $51,713$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DHV Factor | 11.28\% |  | 10.44\% |  | 12.03\% |  | 13.19\% |  |
| Peak | 6,573 |  | 6,084 |  | 6,891 |  | 6,821 |  |
| Speed | 55 mph |  | 45 mph |  | 35 mph |  | 35 mph |  |
| Lane Width | 2 lanes @ 12 feet |  | 2 lanes @ 12 feet |  | 2 lanes @ 12 feet |  | 2 lanes @ 12 feet |  |
| Directional Split | 50/50 |  | 50/50 |  | 50/50 |  | $50 / 50$ |  |
| Vehicle Mix | 92\% Autos + 8\% Heavy Trucks |  | 92\% Autos + 8\% Heavy Trucks |  | 93\% Autos + 7\% Heavy Trucks 97 |  | 97\% Autos + 3\% Heavy Trucks |  |
|  | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) | Eastbound (per lane) | Westbound (per lane) |
| Autos | 3,024 | 3,024 | 2,799 | 2,799 | 3,204 | 3,204 | 3,308 | 3,308 |
| Heavy Trucks | 263 | 263 | 243 | 243 | 241 | 241 | 102 | 102 |

CHATS 2\% growth rate was used for year 2040.
Source: Clements Ferry Road from Jack Primus Road to SC 41 Widening Study, Haselden and Associates (September 7, 2017).

## APPENDIX B

Field Measurement Data Sheets

Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633B

## 5044712

6/14/2016 1:54:01 PM
00:35:38 HH:MM:SS
Keith A

## LAeq

End Date \& Time
Calibration (Before) SPL
68.1 dB

6/14/2016 2:29:39 PM
114 dB



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633A

2145366
6/14/2016 1:56:31 PM
00:33:05 HH:MM:SS
Keith B

## LAeq

End Date \& Time
Calibration (Before) SPL
69.8 dB

6/14/2016 2:29:36 PM
114 dB



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633A

2145366
6/15/2016 4:01:22 PM
00:31:17 HH:MM:SS
Captain Bill A

| LAeq | 70.6 dB |
| :--- | :--- |
| End Date \& Time | $6 / 15 / 2016$ 4:32:39 PM |
| Calibration (Before) SPL | 114 dB |




Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633B

## 5044712

6/15/2016 4:02:31 PM
00:31:00 HH:MM:SS
Captain Bill B

## LAeq

End Date \& Time
Calibration (Before) SPL
66.7 dB

6/15/2016 4:33:31 PM
114 dB



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633A

2145366
6/17/2016 1:22:06 PM
00:20:18 HH:MM:SS
Bennington Drive

LAeq
End Date \& Time
Calibration (Before) SPL
56.3 dB

6/17/2016 1:42:24 PM
114 dB



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633A

2145366
6/14/2016 2:50:09 PM
00:46:46 HH:MM:SS
Tyler Street North

LAeq
End Date \& Time
Calibration (Before) SPL
60.7 dB

6/14/2016 3:36:55 PM
114 dB



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633B

## 5044712

6/14/2016 2:47:56 PM
00:48:14 HH:MM:SS
Tyler St South



Air Hub Project No: CHS-16-049

## Instrument Model

Serial Number
Start Date \& Time
Duration
Notes

CEL-633A

2145366
6/17/2016 2:02:29 PM
00:33:53 HH:MM:SS
St. Paul Baptist

## LAeq

End Date \& Time
Calibration (Before) SPL
62.2 dB

6/17/2016 2:36:22 PM
114 dB



## Tally Sheet

| Date: $6\|17\| 16$ | Start Time: $2: 03$ | Finish Time: $2: 33$ |
| :--- | :--- | :--- |
| Location: St. Pav\| | Weather: Sunny | Road Conditions: duy |
| Observer: Saiaro |  |  |

Noise Conditions: quiet


Tally Sheet

| Date: $6\|14\| 16$ | Start Time: $3: 15$ | Finish Time: $3: 40$ |
| :--- | :--- | :--- | :--- |
| Location: TYler St | Weather: sunny | Road Conditions: dy |
| Observer: Sciarn |  |  |

Noise Conditions: Had to restart count after extended conversation with homeowner. Significant constretion noise
$\qquad$
$\qquad$

home
$*$
him.


Sisniticart
construction $\not$
norse

Tally Sheet

| Date: $6\|17\| 16$ | Start Time: $1: 20$ | Finish Time: $1: 40$ |
| :--- | :--- | :--- |
| Location: Bennington Weather: sunny | Road Conditions: dm y |  | Observer: Seiarno

Noise Conditions: grivet afternoon
$\qquad$



Tally Sheet

| Date: $6\|14\| 16 \quad$ Start Time: $4: 00$ | Finish Time: $4: 30$ |
| :--- | :--- | :--- |
| Location: $($ aptain Bill) Weather: Sunny | Road Conditions: dm y |
| Observer: Sciarv |  |

Noise Conditions: conditions hectic with various residents
and police other talking and asking questions.
$\qquad$ section's. Construction sounds across C

home
home
home

Tally Sheet

| Date: $6\|14\| 16$ | Start Time: $1: 55$ | Finish Time: $2: 25$ |
| :--- | :--- | :--- |
| Location: museum | Weather: Sunni y | Road Conditions: dy |
| Observer: Sciurro |  |  |

Noise Conditions: quiet, steady light trathic museum. R220140
 to Sc 41 to sch

- A


Pine Environmental Services, Inc

| Instrument ID R220142 <br> Description CEL-63X Sound Level Meter <br> Calibrated 8/5/2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Manufacturer Casella <br> Model Number CEL-63X <br> Serial Number 2145376 <br> Location New Jersey Temp 75 |  |  | Classification  <br> Status pass <br> Frequency Yearly EOM <br> Department Lab <br> Humidity 33 |  |  |
| Group \# Calibration Specifications <br> Group Name  Acoustic Tests Performed $\quad$ As Left Result: Pass |  |  |  |  |  |
| Test Instruments Used During the Calibration |  |  |  | (As Of Cal Entry Date) |  |
| Test Instrument ID | Description | Manufacturer | Serial Number | Last Cal Date | Next Cal Date |
| B\&K 4226 | Brül \& Kjær 4226 | Brüel \& Kjær | 2590968 | 2/27/2015 | 2/27/2016 |
| B\&K 4228 | Brüel \& Kjær 4228 | Brüel \& Kjær | 2667476 | 2/27/2015 | 2/27/2016 |
| FLUKE 114 | Fluke 114 NIST Traceable Multimeter | Fluke | 15310288 | 4/25/2015 | 4/25/2016 |

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Kevin Cole
Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

## INSTRUMENT CALIBRATION REPORT

Advanced Labs, Inc.

Pine Environmental Services, Inc

| Instrument ID R220142 <br> Description CEL-63X Sound Level Meter <br> Calibrated 8/5/2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Manufacturer Casella <br> Model Number CEL-63X <br> Serial Number 2145376 <br> Location New Jersey <br> Temp 75 |  |  | Classification  <br> Status pass <br> Frequency Yearly EOM <br> Department Lab <br> Humidity 33 |  |  |
| Test Performed: | Group \# 1 <br> up Name Acoustic Tests P As Found Resu | Calibratio <br> rmed <br> ail | As Left Result: Pass |  |  |
| Test Instruments Used During the Calibration |  |  |  | (As Of Cal Entry Date) |  |
| Test Instrument ID | Description | Manufacturer | Serial Number | Last Cal Date | Next Cal Date |
| B\&K 4226 | Brüel \& Kjær 4226 | Brüel \& Kjær | 2590968 | 2/27/2015 | 2/27/2016 |
| B\&K 4228 | Brüel \& Kjær 4228 | Brüel \& Kjær | 2667476 | 2/27/2015 | 2/27/2016 |
| FLUKE 114 | Fluke 114 NIST Traceable Multimeter | Fluke | 15310288 | 4/25/2015 | 4/25/2016 |

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Kevin Cole
Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

Pine Environmental Services, Inc

| Instrument ID |
| :---: |
| Description |
| Calibrated | 2/11/2016

## Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Kevin Cole
Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

Pine Environmental Services, Inc


Test Instruments Used During the Calibration

| Manufacturer | Serial Number | (As Of Cal Entry Date) |  |
| :---: | :---: | :---: | :---: |
|  |  | Last Cal Date | Next Cal Date |
| Brüel \& Kjar | 2590968 | 2/27/2015 | 2/27/2016 |
| Brüel \& Kjær | 2667476 | 2/27/2015 | 2/27/2016 |
| Fluke | 15310288 | 4/25/2015 | 4/25/2016 |
| Quest Technologies | BLL070002 | 12/8/2015 | 12/8/2016 |

Notes about this calibration

## Calibration Result Calibration Successful <br> Who Calibrated Kevin Cole

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 610000 | 610050 | 610100 | 610150 | 610200 | 610250 |

RESULTS: SOUND LEVELS


| Clements Ferry Noise Study |  | Sheet 1 of 1 30 Oct 2016 |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| Plan View |  | Project/Contract No. Captain Bill Validation |  |
| Run name: CptBill |  | TNM Version 2.5, Feb 2004 |  |
| Scale: |  | 50 mAnalysis By: T. Sciarro |  |
| Roadway: |  | Ground Zone: | polygon |
| Receiver: | $\square$ | Tree Zone: | dashed polygon |
| Barrier: | $\longrightarrow$ | Contour Zone: | polygon |
| Building Row: | - - | Parallel Barrier: | 边 |
| Terrain Line: |  | Skew Section: | $\square \quad \rightarrow$ |

604750
604800
604850
604900
604950
605050
RESULTS: SOUND LEVELS

RESULTS: SOUND LEVELS

RESULTS: SOUND LEVELS


RESULTS: SOUND LEVELS


## APPENDIX C

## Feasible and Reasonable Worksheets

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 6, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 1 - Receiver 14

## Feasibility

| Number of Impacted Receivers | Number o |
| :---: | :---: |
| Percentage of Impacted Receive noise abatement measure | s that would achieve a 5 dBA reduction |
| Is the proposed noise abatement NOTE:SCDOT Policy indicates achieve at least a 5 dBA reductio | measure acoustically feasible? <br> hat $75 \%$ of the impacted receivers must for it to be acoustically feasible. |

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxtimes$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\square$ Yes | $X$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
Detailed Description

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$ Number of Benefited Receivers

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?


If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\mathbb{\boxtimes}$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, contimue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be

Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 6, 2018


## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilitics | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\square$ Yes | $\boxed{X}$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{X}$ No |

If "Yes" was marked for any of the questions above, please explain below.
Detailed Description

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was deternined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 1

Number of Benefited Receivers that achieve at least an $8 \subset B A$ reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
区 Yes
$\square$ No
If "Yes" is marked, contimue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

202,125

Estimated cost per Benefited Receiver

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectYes $\boxtimes$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 6, 2018

Project Name | Clements Ferry Phase 2; From Jack Primus Road to SC 41 |
| :--- |
| Highway Traffic Noise Abatement Measure |
| Barrier 3 - Receivers 18 \& 19 (5 units) |

## Feasibility

| Number of Impacted Receivers | Number of Benefited Receivers | 0 |
| :---: | :---: | :---: |
| Percentage of Impacted Receivers noise abatement measure | that would achieve a 5 dBA reduction from the proposed | 0 |

Is the proposed noise abatement measure acoustically feasible? NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\square$ Yes $\boxtimes$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\boxed{\text { No }}$ |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
Barrier length could not be extended due to the existing access being cut-off.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve al least an 8 dBA reduction $\square$
0

Percentage of Benefited Receivers in the first iwo building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35,00$ per square foot and a more project-Yes No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 6, 2018


## Feasibility



Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must
$\square$ Yes $\square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $\boxed{X}$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $\boxed{\text { No }}$ |
| Access | $\boxed{Y}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\text { No }}$ |

If "Yes" was marked for any of the questions above, please explain below.
Barrier length could not be extended due to the existing access being cut-off.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.
\#1: Noise Reduction Design Goal
$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?


If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

91,665 $\square$

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 Yes $\triangle$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be Yes No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date：Feb 6，2018

| Project Name | Clements Ferry Phase 2：From Jack Primus Road to SC 41 |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 5－Receiver 21 （2 units） |

## Feasibility



Would any of the following issues limit the ability of the abatement measure to achicve the noise reduction goal？

| Topography | $\square \mathrm{Yes}$ | 区 |
| :---: | :---: | :---: |
| Safety | $\square \mathrm{Yes}$ | 区 |
| Drainage | $\square \mathrm{Yes}$ | 区 |
| Utilities | $\square$ Yes | 区 |
| Maintenance | $\square \mathrm{Yes}$ | 区 |
| Access | X Yes | $\square$ |
| Exposed Height of Wall | $\square$ Yes | 区 |

If＂Yes＂was marked for any of the questions above，please explain below．
Barrier length could not be extended due to the existing access being cut－off．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be teasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form iris not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal



Number of Benefted Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectYes No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be Yes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 6, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure $\quad$ Barrier 6a \& 6b-Receiver 33,36,38, \& 39

## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{\text { No }}$ |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $\boxed{\text { No }}$ |
| Drainage | $\square$ Yes | $\boxed{\text { No }}$ |
| Utilities | $\square$ Yes | $\boxed{\text { No }}$ |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\text { No }}$ |

If "Yes" was marked for any of the questions above, please explain below.
Barrier length could not be extended due to the existing access being cut-off.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 2
Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

No
If "Yes" is marked, continue 10 \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver


174,492

Estimated construction cost for noise abatement measure

348,985

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\boxtimes$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^0]
## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 6, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 7 - Receivers 34 \& 35

## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
Barrier length could not be extended due to the existing access being cut-off.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure
Estimated cost per Benefited Receiver 0


Estimated construction cost for noise abatement measure

0
0

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes 区 No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date：Feb 6， 2018

Project Name Clements Ferry Phase 2：From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 8 －Receiver 40

## Feasibility

Number of Impacted Receivers
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure
Is the proposed noise abatement measure acoustically feasible？

NOTE：SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\quad \square$ Yes | Number of Benefited Receivers |
| :--- | achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square \mathrm{Yes}$ | 区 | No |
| :---: | :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 | No |
| Drainage | $\square$ Yes | 区 | No |
| Utilities | $\square$ Yes | 区 | No |
| Maintenance | $\square$ Yes | 区 | No |
| Access | 区 Yes | $\square$ | No |
| Exposed Height of Wall | $\square \mathrm{Yes}$ | 区 | No |

If＂Yes＂was marked for any of the questions above，please explain below．
Barrier length could not be extended due to the existing access being cut－off．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for tit to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If" No" is marked, then abatememt is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date：Feb 6， 2018
Project Name Clements Ferry Phase 2：From Jack Primus Road to SC 41
Highway Traffic Noise Abatement Measure Barrier 9 －Receivers 41，46，47，48，54，57，58 \＆ 61

## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square$ Yes | 区 |
| :---: | :---: | :---: |
| Salety | $\square$ Yes | 区 |
| Drainage | $\square$ Yes | 区 |
| Utilities | $\square \mathrm{Yes}$ | 区 |
| Maintenance | $\square$ Yes | 区 |
| Access | $\square \mathrm{Y}$ Y | 区 |
| Exposed Height of Wall | $\square$ Yes | 区 |

If＂Yes＂was marked for any of the questions above，please explain below．

## Reasonableness

According to 23 CFR 772．13（d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#I: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 7 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35,00$ per square foot and a more project-Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Bencifited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and fesidents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be

Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^1]
# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

| Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 10 - Receivers 42 \& 43 |

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square]$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $\square$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
Extending the fall to increase noise reduction would remove existing access points.

## Reasonableness

According to 23 CFR 772.13(d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is detemined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA . reduction $\square$

## 0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve al least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be

Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date：Feb 7， 2018

Project Name Clements Ferry Phase 2：From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure Barrier 11－Receivers 44 \＆ 45

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square$ Yes | 区 | No |
| :---: | :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 | No |
| Drainage | $\square$ Yes | 区 | No |
| Utilities | $\square$ Yes | 区 | No |
| Maintenance | $\square$ Yes | 区 | No |
| Access | $\triangle$ Yes | $\square$ | No |
| Exposed Height of Wall | $\square \mathrm{Yes}$ | 区 | No |

If＂Yes＂was marked for any of the questions above，please explain below．
Extending the fall to increase noise reduction would remove existing access points．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．
\#1: Noise Reduction Design Goal
Number of Benefited Receivers 0
Number of Benefited Receivers that achieve at least an 8 dBA reduction

## 0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is deternined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Bencfited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018


## Feasibility

Number of Impacted Receivers | Number of Benefited Receivers |
| :--- |
| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed |
| noise abatement measure |
| Is the proposed noise abatement measure acoustically feasible? |
| NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\square$ | Yes $\square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\boxed{Y}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\text { No }}$ |

If "Yes" was marked for any of the questions above, please explain below.
Extending the fall to increase noise reduction would remove existing access points.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, contime to \#2. If "No" is marked, then abatement is determined NOT to be reasonable,

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benelited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^2]
# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure
Barrier 13 - Receiver 66

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
Extending the fall to increase noise reduction would remove existing access points.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes $\boxtimes$ No

> If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatentent is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$

Number of Benefited Receivers in support of noise abatement measure

Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be

Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date：Feb 7， 2018


## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square \mathrm{Yes}$ | 区 | No |
| :---: | :---: | :---: | :---: |
| Safety | $\square \mathrm{Yes}$ | 区 | No |
| Drainage | $\square \mathrm{Yes}$ | 区 | No |
| Utilities | $\square$ Yes | 区 | No |
| Maintenance | $\square \mathrm{Yes}$ | 区 | No |
| Access | $\triangle$ Yes | $\square$ | No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\square}$ | No |

If＂Yes＂was marked for any of the questions above，please explain below．
Extending the fall to increase noise reduction would remove existing access points．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．
\#l: Noise Reduction Design Goal
Number of Benefited Receivers 0
Number of Benefited Receivers that achieve at least an 8 dBA reduction

## 0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

> If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 Yes No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benelited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |  |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 15 - Receiver 70 |

## Feasibility

| Number of Impacted Receivers | 1 | Number of Benefited Receivers | 0 |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure |  |  |  |  |
| Is the proposed noise abatement NOTE:SCDOT Policy indicates | Is the proposed noise abatement measure acoustically feasible? |  |  |  | achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{\text { No }}$ |
| Utilities | $\square$ Yes | $\boxed{\text { No }}$ |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\text { No }}$ |

If "Yes" was marked for any of the questions above, please explain below.
Extending the fall to increase noise reduction would remove existing access points.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$

## 0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project- $\square$ Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, contimue to \#3. If "No" is marked, then abatement is determined NOT" to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Mcasure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date：Feb 7， 2018


## Feasibility



Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure

Is the proposed noise abatement measure acoustically feasible？
NOTE：SCDOT Policy indicates that $75 \%$ of the impacted receivers must
$\boxtimes$ Yes $\square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square \mathrm{Yes}$ | 区 |
| :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 |
| Drainage | $\square$ Yes | 区 |
| Utilities | $\square$ Yes | 区 |
| Maintenance | $\square$ Yes | 区 |
| Access | 区 Yes | $\square$ |
| Exposed Height of Wall | $\square \mathrm{Yes}$ | 区 |

If＂Yes＂was marked for any of the questions above，please explain below．
Extending the fall to increase noise reduction would remove existing access points．

## Reasonableness

According to 23 CFR $772.13(\mathrm{~d})(2)(i v)$ the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
区 Yes
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes 区 No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benelited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- |
| Highway Traffic Noise Abatement Measure |
| Barrier 17 - Receiver 72 |

## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $\boxed{X}$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\boxed{\text { No }}$ |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{X}$ No |

If "Yes" was marked for any of the questions above, please explain below.
Extending the fall to increase noise reduction would remove existing access points.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers $\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
$\square$ Yes
区 No

If "Yes" is marked, contimue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

0


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectYes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Bencfited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018


## Feasibility



Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\square$ Yes | $\boxed{X}$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectYes $\boxtimes$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers
Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^3]
## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traflic Noise Abatement Measure Barrier 19 - Receivers 110 to 114

## Feasibility

Number of Impacted Receivers

| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed |
| :--- |
| noise abatement measure |
| Is the proposed noise abatement measure acoustically feasible? |
| NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must |
| achieve at least a 5 dBA reduction for it to be acoustically feasible. |

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $X$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 5

Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from
the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## 区 Yes

No

> If "Yes" is marked, continue to "42. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure

280,175

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise antalysis is based on $\$ 35.00$ per square foot and a more project$\square$ Yes $\mathbb{\boxtimes}$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date：Feb 7， 2018
Project Name Clements Ferry Phase 2：From Jack Primus Road to SC 41
Highway Traffic Noise Abatement Measure Barrier 20－Receiver 131

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square$ Yes | 区 | No |
| :---: | :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 | No |
| Drainage | $\square \mathrm{Yes}$ | 区 | No |
| Utilities | $\square$ Yes | 区 | No |
| Maintenance | $\square \mathrm{Yes}$ | 区 | No |
| Access | 区 Yes | $\square$ | No |
| Exposed Height of Wall | $\square \mathrm{Yes}$ | 区 | No |

If＂Yes＂was marked for any of the questions above，please explain below．
The length of the barrier could not be extended because it would block existing access．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achicve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.
Does the proposed noise abatement measure meet the noise reduction design goal?

No
lf "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectYes $\boxtimes$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Bencfited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^4]
## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018
Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41
Highway Traffic Noise Abatement Measure Barrier 21 - Receiver 134 (Keith School Museum)

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 Yes $\triangle$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers
Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^5]
## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

| Project Name $\left.\begin{array}{\|l\|}\hline \text { Clements Ferry Phase 2: From Jack Primus Road to SC } 41 \\ \hline \text { Highway Traffic Noise Abatement Measure } \\ \hline\end{array}\right]$ Barrier 22 - Receivers 171 to 174 |
| :--- |

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.
\#1: Noise Reduction Design Goal


Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$
1
Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable,

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver


100,065

Estimated construction cost for noise abatement measure

100,065

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35,00$ per square foot and a more project-Yes 区 No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable,
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers
opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

| Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 23 - Receivers 199 to 202 |

## Feasibility

| Number of Impacted Receivers | 4 | Number of Benefited Receivers | 4 |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure |  |  |  | 00 |

Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must
X Yes $\quad \square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{Y e s}$ | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction $\square$

## 4

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure

147,245

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35,00$ per square foot and a more project-Yes $\boxtimes$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)

Number of Benefited Receivers
in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: | Feb 7, 2018 |
| :---: |
| Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| Highway Traffic Noise Abatement Measure Barrier 24 - Receivers $203 \& 204$ |

## Feasibility



Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure

Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must
Yes
$\boxed{\text { No }}$ achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $\boxed{X}$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\square$ Yes | $X$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{X}$ No |

If "Yes" was marked for any of the questions above, please explain below.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achicve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, contimue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver $\square$

Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Recejvers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- |
| Highway Traffic Noise Abatement Measure $\quad$ Barrier 25-Receivers 219 to 222 |

## Feasibility

| Number of Impacted Receivers | 4 | Number of Benefited Receivers | 2 |
| :---: | :---: | :---: | :---: |
| Percentage of Impacted Receiv noise abatement measure |  | reduction from the proposed |  |

Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must
Yes
No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\boxed{X}$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.
\#1: Noise Reduction Design Goal
Number of Benefited Receivers 2
Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.
Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes $\boxtimes$ No

> If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectspecific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If"Yes" is marked, contimue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers
opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure

Percentage of Benefited Receivers opposed to noise abatement measure

Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes


No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 26 - Receiver 224

Feasibility

| Number of Impacted Receivers | Number of Benefited Receivers | 1 |
| :---: | :---: | :---: |
| Percentage of Impacted Receiv noise abatement measure | sthat would achieve a 5 dBA reduction from the proposed | 100 |

Is the proposed noise abatement measure acoustically feasible? NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must X Yes achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access. Barrier also blocks existing parking and lot and access ways on the property.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.
\#1: Noise Reduction Design Goal


Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, contimue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver
$\square$

33,285

Estimated construction cost for noise abatement measure

33,285

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project$\square$ Yes $X$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure
Barrier 27 - Receiver 225

## Feasibility

Number of Impacted Receivers $10 \quad$ Number of Benefited Receivers 1
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure

Is the proposed noise abatement measure acoustically feasible? NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\boxed{X}$ Yes $\square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 1

Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Recejvers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure
30,135
30,135

Estimated construction cost for noise abatement measure

Estimated cost per Benefited Receiver

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $X$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers
in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018


Feasibility
 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\square$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13(d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction 0

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

## 0

Does the proposed noise abatement measure meet the noise reduction design goal?Yes
No
If"Yes" is marked, continue to " 2 . If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure $\square$ Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-YesNo specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT lo be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


## Number of Benefited Receivers

in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

| Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 29 - Receiver 239 |

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 1

Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes $\triangle$ No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure $\square$
Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-YesNo specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers
Number of Benefited Receivers (same as above)

Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure

Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 7, 2018

Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- |
| Highway Traffic Noise Abatement Measure Barrier 30-Receiver 251 |.

## Feasibility

 achieve al least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $\boxed{X}$ No |
| Access | $\boxed{Y e s}$ | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR $772.13(\mathrm{~d})(2)(i v)$ the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver
$\square$
134,715

Estimated construction cost for noise abatement measure

134,715

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-Yes $\mathbb{\boxtimes}$ № specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018


## Feasibility

Number of Impacted Receivers
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure
Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\quad$ Number of Benefited Receivers
achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $X$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?

> If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy slates that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project$\square$ Yes $\triangle$ No specific construction cost should be applited at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- |
| Highway Tramic Noise Abatement Measure |
| Barrier 32 - Receiver 264 |

Feasibility

Number of Impacted Receivers \begin{tabular}{l}
Number of Benefited Receivers <br>
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed <br>
noise abatement measure <br>
Is the proposed noise abatement measure acoustically feasible? <br>
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\quad \square$ Yes

 

No
\end{tabular} achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\boxed{X}$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectspecific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date：Feb 7， 2018

| Project Name | Clements Ferry Phase 2：From Jack Primus Road to SC 41 |
| :--- | :--- |
| Highway Traffic Noise Abatement Measure | Barrier 33 －Receiver 265 |

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square$ Yes | 区 |
| :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 |
| Drainage | $\square$ Yes | 区 |
| Utilities | $\square$ Yes | 区 |
| Maintenance | $\square \mathrm{Yes}$ | 区 |
| Access | $\triangle$ Yes | $\square$ |
| Exposed Height of Wall | $\square$ Yes | 区 |

## If＂Yes＂was marked for any of the questions above，please explain below．

The length of the barrier could not be extended because it would block existing access．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, contintue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure $\square$ Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project- $\square$ specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

> If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)

Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be

YesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

[^6]
## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 7, 2018

| Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |  |
| :---: | :---: | :---: |
| Highway Traft | Iic Noise Abatement Measure | Barrier 34 - Receiver 268 (5 units) |

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{X e s}$ | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13(d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes $\boxtimes$ No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 YesNo specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefited receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 8, 2018

## Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

## Highway Traffic Noise Abatement Measure <br> Barrier 35 - Receiver 289 (4 units)

## Feasibility

| Number of Impacted Receivers | 4 | Number of Benefited Receivers | 4 |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure |  |  | 10 |  |
| Is the proposed noise abatement NOTE:SCDOT Policy indicates | Is the proposed noise abatement measure acoustically feasible? |  |  | No | achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

## If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal



Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatememt is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure $\square$
Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-YesNo specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure

Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes


No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 8, 2018


## Feasibility



Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that 75\% of the impacted receivers must
$\boxtimes$ Yes $\quad \square$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#I: Noise Reduction Design Goal

Number of Benefited Receivers 1

Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure

Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure

35,140

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectspecific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If"No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receplors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible, but not reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 8,2018

| Project Name | Clements Ferry Phase 2: From Jack Primus Road to SC 41 |
| :--- | :--- |
|  |  |
| Highway Traffic Noise Abatement Measure | Barrier 37 - Receiver 293 |

Feasibility
Number of Impacted Receivers 1
Number of Benefited Receivers
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure
Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\quad \square$ Yes $\quad$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13(d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 0

Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA . reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?Yes
No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continte to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 13, 2018


Feasibility
 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{\text { No }}$ |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\square$ No |
| Access | $\square$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver $\square$
Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Poticy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project$\square$ Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If"Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure
Number of Benefited Receivers opposed to noise abatement measure

Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date：Feb 13， 2018

Project Name Clements Ferry Phase 2：From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 39 －Receiver 226

## Feasibility

Number of Impacted Receivers 11

| 1 |  |
| :--- | :--- | :--- |
| Number of Benefited Receivers | 1 |


| Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed |
| :--- |
| noise abatement measure |

Is the proposed noise abatement measure acoustically feasible？ NOTE：SCDOT Policy indicates that $75 \%$ of the impacted receivers must
 achieve at least a 5 dBA reduction for it to be acoustically feasible．

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal？

| Topography | $\square$ Yes | 区 |
| :---: | :---: | :---: |
| Safety | $\square$ Yes | 区 |
| Drainage | $\square$ Yes | 区 |
| Utilities | $\square$ Yes | 区 |
| Maintenance | $\square$ Yes | 区 |
| Access | X Yes | $\square$ |
| Exposed Height of Wall | $\square$ Yes | 区 |

If＂Yes＂was marked for any of the questions above，please explain below．
The length of the barrier could not be extended because it would block existing access．

## Reasonableness

According to 23 CFR 772.13 （d）（2）（iv）the abatement measure must collectively achieve each of these criteria to be reasonable．Therefore if any of the three mandatory reasonable factors are not achieved，then the abatement measure is determined NOT to be reasonable．When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable．

## \#1: Noise Reduction Design Goal

$\square$ Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver

Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-
 Yes $\square$ No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, contintue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYesNo constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is feasible but not reasonable.

# SCDOT Feasibility and Reasonableness Worksheet 

Date: Feb 13, 2018
$\square$
Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 40 - Receiver 240

## Feasibility

Number of Impacted Receivers
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure
Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must $\quad \square$ Yes $\quad \square$ achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 0

Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes
No
If "Yes" is marked, contimue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated cost per Benefited Receiver


Estimated construction cost for noise abatement measure


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-No specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If"Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respend to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 13, 2018

Project Name Clements Ferry Phase 2: From Jack Primus Road to SC 41

Highway Traffic Noise Abatement Measure

## Barrier 41 - Receiver 292

## Feasibility

 achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $X$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $X$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.

The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 0

Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two butlding rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal? $\square$ Yes $\boxtimes$ No
If "Yes" is marked, continue to "2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver

$\square$

Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-YesNo specific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If "Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above) $\square$
Number of Benefited Receivers
in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes


No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

## SCDOT Feasibility and Reasonableness Worksheet

Date: Feb 13, 2018


Feasibility
Number of Impacted Receivers 1


Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed noise abatement measure

Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that 75\% of the impacted receivers must
$x$ No achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\boxed{X}$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $X$ No |
| Drainage | $\square$ Yes | $\square$ No |
| Utilities | $\square$ Yes | $X$ No |
| Maintenance | $\square$ Yes | $\boxed{\text { No }}$ |
| Access | $\boxed{X}$ Yes | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $\boxed{\text { No }}$ |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13 (d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 0

Number of Benefited Receivers that achieve at least an 8 dBA reduction


Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

## $\qquad$

Does the proposed noise abatement measure meet the noise reduction design goal?Yes
No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure $\square$ Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable?
NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more project-

If "Yes" is marked, contintue to "3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall be


Yes
No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

Date: Feb 13, 2018


## Feasibility

Number of Impacted Receivers
Percentage of Impacted Receivers that would achieve a 5 dBA reduction from the proposed
noise abatement measure
Is the proposed noise abatement measure acoustically feasible?
NOTE:SCDOT Policy indicates that $75 \%$ of the impacted receivers must
achieve at least a 5 dBA reduction for it to be acoustically feasible.

Would any of the following issues limit the ability of the abatement measure to achieve the noise reduction goal?

| Topography | $\square$ Yes | $\square$ No |
| :--- | :--- | :--- |
| Safety | $\square$ Yes | $\boxed{X}$ No |
| Drainage | $\square$ Yes | $X$ No |
| Utilities | $\square$ Yes | $\square$ No |
| Maintenance | $\square$ Yes | $X$ No |
| Access | $\boxed{X e s}$ | $\square$ No |
| Exposed Height of Wall | $\square$ Yes | $X$ No |

If "Yes" was marked for any of the questions above, please explain below.
The length of the barrier could not be extended because it would block existing access.

## Reasonableness

According to 23 CFR 772.13(d)(2)(iv) the abatement measure must collectively achieve each of these criteria to be reasonable. Therefore if any of the three mandatory reasonable factors are not achieved, then the abatement measure is determined NOT to be reasonable. When completing the form it is not necessary to detail each of the criteria if one was determined not to be reasonable.

## \#1: Noise Reduction Design Goal

Number of Benefited Receivers 0
Number of Benefited Receivers that achieve at least an 8 dBA reduction

Percentage of Benefited Receivers in the first two building rows that would achieve at least a 8 dBA reduction from the proposed noise abatement measure. NOTE: SCDOT Policy indicates that $80 \%$ of the benefited receivers in the 0 first two building rows must achieve at least a 8 dBA reduction for it to be reasonable.

Does the proposed noise abatement measure meet the noise reduction design goal?


Yes
区 No
If "Yes" is marked, continue to \#2. If "No" is marked, then abatement is determined NOT to be reasonable.

## \#2: Cost Effectiveness

Estimated cost per square foot for noise abatement measure


Estimated construction cost for noise abatement measure


Estimated cost per Benefited Receiver


Based on the SCDOT policy of $\$ 30,000$ per Benefited Receiver, would the abatement measure be reasonable? NOTE: SCDOT Policy states that the preliminary noise analysis is based on $\$ 35.00$ per square foot and a more projectspecific construction cost should be applied at a cost per square foot basis during the detailed noise abatement evaluation.

If"Yes" is marked, continue to \#3. If "No" is marked, then abatement is determined NOT to be reasonable.
\#3: Viewpoints of the property owners and residents of the benefitted receivers

Number of Benefited Receivers (same as above)


Number of Benefited Receivers
in support of noise abatement measure


Percentage of Benefited Receivers in support of noise abatement measure


Number of Benefited Receivers opposed to noise abatement measure


Percentage of Benefited Receivers opposed to noise abatement measure


Number of Benefited Receivers that did not respond to solicitation on noise abatement measure


Percentage of Benefited Receivers that did not respond to solicitation on noise abatement measure


Based on the viewpoints of the property owners and residents of the Benefited Receivers, would the abatement measure be reasonable? NOTE: SCDOT Policy indicates that the noise abatement shall beYes No constructed unless greater than $50 \%$ of the benefited receptors are opposed to noise abatement.

Final Determination for Noise Abatement Measure
Based on the above results, this abatement feature is not feasible or reasonable.

Clements Ferry Phase 2 Widening




| INPUT: ROADWAYS |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point934 | 934 | 2,351,169.8 | 400,589.7 | 31.00 |  |  | Average |  |
|  | point935 | 935 | 2,351,294.2 | 400,656.0 | 31.00 |  |  | Average |  |
|  | point936 | 936 | 2,351,438.5 | 400,732.1 | 31.00 |  |  | Average |  |
|  | point937 | 937 | 2,351,486.8 | 400,754.5 | 31.00 |  |  | Average |  |
|  | point938 | 938 | 2,351,526.2 | 400,772.4 | 31.00 |  |  | Average |  |
|  | point939 | 939 | 2,351,620.8 | 400,817.3 | 30.00 |  |  | Average |  |
|  | point940 | 940 | 2,351,757.8 | 400,875.5 | 30.00 |  |  | Average |  |
|  | point941 | 941 | 2,351,865.2 | 400,923.0 | 30.00 |  |  | Average |  |
|  | point942 | 942 | 2,352,011.2 | 400,990.1 | 29.00 |  |  | Average |  |
|  | point943 | 943 | 2,352,140.2 | 401,053.7 | 29.00 |  |  | Average |  |
|  | point944 | 944 | 2,352,193.0 | 401,081.4 | 28.00 |  |  | Average |  |
|  | point945 | 945 | 2,352,288.0 | 401,130.7 | 28.00 |  |  | Average |  |
|  | point946 | 946 | 2,352,416.0 | 401,198.8 | 27.00 |  |  | Average |  |
|  | point947 | 947 | 2,352,584.2 | 401,287.4 | 27.00 |  |  | Average |  |
|  | point948 | 948 | 2,352,730.0 | 401,364.0 | 26.00 |  |  | Average |  |
|  | point949 | 949 | 2,352,863.5 | 401,435.6 | 26.00 |  |  | Average |  |
|  | point950 | 950 | 2,353,048.8 | 401,532.3 | 25.00 |  |  | Average |  |
|  | point951 | 951 | 2,353,295.0 | 401,662.2 | 25.00 |  |  | Average |  |
|  | point952 | 952 | 2,353,362.2 | 401,698.0 | 24.00 |  |  | Average |  |
|  | point953 | 953 | 2,353,561.0 | 401,802.8 | 23.00 |  |  | Average |  |
|  | point954 | 954 | 2,353,755.2 | 401,906.6 | 23.00 |  |  | Average |  |
|  | point955 | 955 | 2,353,942.5 | 402,003.3 | 22.00 |  |  | Average |  |
|  | point956 | 956 | 2,354,173.0 | 402,125.6 | 22.00 |  |  | Average |  |
|  | point957 | 957 | 2,354,279.5 | 402,180.2 | 21.00 |  |  | Average |  |
|  | point958 | 958 | 2,354,457.0 | 402,274.2 | 21.00 |  |  | Average |  |
|  | point959 | 959 | 2,354,679,0 | 402,393.3 | 20.00 |  |  | Average |  |
|  | point960 | 960 | 2,354,898.2 | 402,509.8 | 20.00 |  |  | Average |  |
|  | point961 | 961 | 2,354,968.2 | 402,543.8 | 20.00 |  |  | Average |  |
|  | point962 | 962 | 2,355,060.5 | 402,585.0 | 20.00 |  |  | Average |  |
|  | point963 | 963 | 2,355,097.2 | 402,597.5 | 20.00 |  |  | Average |  |
|  | point964 | 964 | 2,355,206.5 | 402,631.5 | 20.00 |  |  | Average |  |
|  | point965 | 965 | 2,355,314,8 | 402,654.8 | 19.00 |  |  | Average |  |
|  | point966 | 966 | 2,355,358.5 | 402,663.8 | 19.00 |  |  | Average |  |
|  | point967 | 967 | 2,355,576.8 | 402,680.0 | 19.00 |  |  | Average |  |
|  | point968 | 968 | 2,355,727.2 | 402,678.2 | 18.00 |  |  | Average |  |
|  | point969 | 969 | 2,355,861.5 | 402,655.8 | 18.00 |  |  | Average |  |
|  | point970 | 970 | 2,356,010.2 | 402,628.1 | 18.00 |  |  | Average |  |
|  | point971 | 971\| | 2,356,132.0 | 402,606.6 | 17.00 |  |  | Average |  |


INPUT: ROADWAYS





INPUT: ROADWAYS


INPUT：ROADWAYS

## WB Inside Lane

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \mathbb{W} \\ & 0 \\ & 0 \\ & \mathbf{d} \\ & \frac{0}{<} \end{aligned}$ | $\begin{aligned} & \mathbf{Q} \\ & \mathbf{8} \\ & \mathbf{e} \\ & \mathbf{0} \\ & \mathbf{Q} \end{aligned}$ | $\begin{aligned} & \text { 品 } \\ & \frac{2}{2} \\ & \frac{3}{3} \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \frac{0}{4} \end{aligned}$ | $\left\|\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ \hline \end{array}\right\|$ | $\begin{aligned} & \mathbf{0} \\ & \mathbf{0} \\ & \mathbf{0} \\ & \stackrel{0}{z} \end{aligned}$ |  |  |  | $\begin{aligned} & 9 \\ & \text { g } \\ & 0 \\ & 0 \\ & \frac{0}{3} \end{aligned}$ |  | $\begin{aligned} & \frac{0}{9} \\ & \frac{0}{0} \\ & \frac{0}{4} \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \frac{a}{0} \\ & \frac{0}{0} \\ & \frac{0}{2} \\ & \frac{1}{2} \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \frac{0}{8} \end{aligned}$ |  |  |  |  |  | $$ | $\begin{aligned} & \text { 䍖 } \\ & \underline{y} \end{aligned}$ |  |  | $\begin{aligned} & \mathbf{W} \\ & \frac{0}{0} \\ & \frac{0}{c} \end{aligned}$ | $\begin{aligned} & \text { We: } \\ & \frac{0}{00} \\ & \frac{0}{4} \end{aligned}$ |  |  |  | $\begin{aligned} & \text { did } \\ & \stackrel{0}{0} \\ & \stackrel{y}{x} \end{aligned}$ | $\begin{aligned} & \frac{9}{0} \\ & \frac{0}{0} \\ & \frac{2}{4} \end{aligned}$ |  |  |  | 㫛 |


INPUT: ROADWAYS





INPUT: ROADWAYS

| INPUT: ROADWAYS |  |  |  |  |  | Clemen | Ferry Pha | 2 Wide |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1466 | 1466 | 2,361,885.5 | 400,523.9 | 10.00 |  |  |  | Average |  |
|  | point1467 | 1467 | 2,361,918.5 | 400,628.3 | 10.00 |  |  |  | Average |  |
|  | point1468 | 1468 | 2,361,939.2 | 400,712.8 | 10.00 |  |  |  | Average |  |
|  | point1469 | 1469 | 2,361,953.2 | 400,792.8 | 10.00 |  |  |  | Average |  |
|  | point1470 | 1470 | 2,361,962.0 | 400,861.1 | 10.00 |  |  |  | Average |  |
|  | point1471 | 1471 | 2,361,967.2 | 400,932.5 | 10.00 |  |  |  | Average |  |
|  | point1472 | 1472 | 2,361,968.0 | 400,991.7 | 10.00 |  |  |  | Average |  |
|  | point1473 | 1473 | 2,361,963.8 | 401,089.1 | 10.00 |  |  |  | Average |  |
|  | point1474 | 1474 | 2,361,959.2 | 401,165.7 | 10.00 |  |  |  | Average |  |
|  | point1475 | 1475 | 2,361,945,5 | 401,255.3 | 11.00 |  |  |  | Average |  |
|  | point1476 | 1476 | 2,361,936.0 | 401,292.7 | 11.00 |  |  |  | Average |  |
|  | point1477 | 1477 | 2,361,922.8 | 401,350.1 | 11.00 |  |  |  | Average |  |
|  | point1478 | 1478 | 2,361,897.5 | 401,432.8 | 11.00 |  |  |  | Average |  |
|  | point1479 | 1479 | 2,361,869.8 | 401,514.2 | 11.00 |  |  |  | Average |  |
|  | point1480 | 1480 | 2,361,831.5 | 401,597.7 | 11.00 |  |  |  | Average |  |
|  | point1481 | 1481 | 2,361,768.8 | 401,719.5 | 11.00 |  |  |  | Average |  |
|  | point1482 | 1482 | 2,361,721.8 | 401,788.2 | 12.00 |  |  |  | Average |  |
|  | point1483 | 1483 | 2,361,678.2 | 401,847.4 | 12.00 |  |  |  | Average |  |
|  | point1484 | 1484 | 2,361,607.8 | 401,929.2 | 12.00 |  |  |  | Average |  |
|  | point1485 | 1485 | 2,361,553.0 | 401,985.7 | 12.00 |  |  |  | Average |  |
|  | point1486 | 1486 | 2,361,439,0 | 402,083.2 | 13.00 |  |  |  | Average |  |
|  | point1487 | 1487 | 2,361,355.5 | 402,141.5 | 13.00 |  |  |  | Average |  |
|  | point1488 | 1488 | 2,361,280.2 | 402,189.1 | 13.00 |  |  |  | Average |  |
|  | point1489 | 1489 | 2,361,175.8 | 402,237.0 | 13.00 |  |  |  | Average |  |
|  | point1490 | 1490 | 2,361,057.5 | 402,283.9 | 13.00 |  |  |  | Average |  |
|  | point1491 | 1491 | 2,360,992.2 | 402,301.3 | 13.00 |  |  |  | Average |  |
|  | point1492 | 1492 | 2,360,935.8 | 402,315.3 | 13.00 |  |  |  | Average |  |
|  | point1493 | 1493 | 2,360,879.2 | 402,328.3 | 13.00 |  |  |  | Average |  |
|  | point1494 | 1494 | 2,360,827.8 | 402,337.0 | 13.00 |  |  |  | Average |  |
|  | point1495 | 1495 | 2,360,753.0 | 402,344.8 | 14.00 |  |  |  | Average |  |
|  | point1496 | 1496 | 2,360,668.5 | 402,350.1 | 14.00 |  |  |  | Average |  |
|  | point1497 | 1497 | 2,360,503.2 | 402,356.2 | 14.00 |  |  |  | Average |  |
|  | point1498 | 1498 | 2,360,452.8 | 402,358.8 | 14.00 |  |  |  | Average |  |
|  | point1499 | 1499 | 2,360,289.2 | 402,366.6 | 14.00 |  |  |  | Average |  |
|  | point1500 | 1500 | 2,359,857.8 | 402,387.5 | 14.00 |  |  |  | Average |  |
|  | point1501 | 1501 | 2,359,607.5 | 402,397.9 | 15.00 |  |  |  | Average |  |
|  | point1502 | 1502 | 2,359,377.0 | 402,410.1 | 15.00 |  |  |  | Average |  |
|  | point1503 | 1503 | 2,359,267,2 | 402,415.3 | 15.00 |  |  |  | \| Average |  |




| point1580 | 1580 | 2,349,055.5 | 399,266.1 | 30.00 |
| :---: | :---: | :---: | :---: | :---: |
| point1581 | 1581 | 2,348,905,8 | 399,172.2 | 30.00 |
| point1582 | 1582 | 2,348,734.5 | 399,065.1 | 30.00 |
| point1583 | 1583 | 2,348,582.2 | 398,968.6 | 30.00 |
| point1584 | 1584 | 2,348,482.2 | 398,908.5 | 30.00 |
| point1585 | 1585 | 2,348,415.5 | 398,874, 1 | 30.00 |
| point1586 | 1586 | 2,348,306.8 | 398,820.2 | 30.00 |
| point1587 | 1587 | 2,348,239.0 | 398,792.3 | 30.00 |
| point1588 | 1588 | 2,348,129.2 | 398,748.0 | 30.00 |
| point1589 | 1589 | 2,348,042.2 | 398,717.5 | 30.00 |
| point1590 | 1590 | 2,347,926.5 | 398,682.7 | 30.00 |
| point1591 | 1591 | 2,347,804.8 | 398,649.6 | 30.00 |
| point1592 | 1592 | 2,347,668.2 | 398,616.6 | 30.00 |
| point1593 | 1593 | 2,347,554.2 | 398,588.7 | 30.00 |
| point1594 | 1594 | 2,347,394.0 | 398,547.8 | 30.00 |
| point1595 | 1595 | 2,347,237.5 | 398,507.8 | 30.00 |
| point1596 | 1596 | 2,347,088.8 | 398,470.4 | 29.00 |
| point1597 | 1597 | 2,346,935,0 | 398,433.7 | 0 |
| point1598 | 1598 | 2,346,792.2 | 398,399.2 | 29.00 |
| point1599 | 1599 | 2,346,706.2 | 398,380.1 | 28.00 |
| point1600 | 1600 | 2,346,633.0 | 398,366.2 | 28.00 |
| point1601 | 1601 | 2,346,588.8 | 398,356.6 | 28.00 |
| point1602 | 1602 | 2,346,490.5 | 398,339.2 | 28.00 |
| point1603 | 1603 | 2,346,380.8 | 398,322.7 | 28.00 |
| point1604 | 1604 | 2,346,299,0 | 398,306.2 | 28.00 |
| point1605 | 1605 | 2,346,203.2 | 398,287.9 | 28.00 |
| point1606 | 1606 | 2,346,152.0 | 398,277.4 | 28.00 |
| point1607 | 1607 | 2,346,078,0 | 398,261.8 | 28.00 |
| point1608 | 1608 | 2,345,987.5 | 398,238.3 | 27.00 |
| point1609 | 1609 | 2,345,923.2 | 398,223.5 | 27.00 |
| point1610 | 1610 | 2,345,867.5 | 398,211.3 | 27.00 |
| point1611. | 1611 | 2,345,770.0 | 398,186.1 | 27.00 |
| point1612 | 1612 | 2,345,649.0 | 398,154.8 | 27.00 |
| point1613 | 1613 | 2,345,537.0 | 398,126.2 | 27.00 |
| point1614 | 1614 | 2,345,415.2 | 398,094.9 | 27.00 |
| point1615 | 1615 | 2,345,321.2 | 398,072.3 | 27.00 |
| point1616 | 1616 | 2,345,264,0 | 398,055.8 | 27.00 |
| point1617 | 1617 | 2,345,203,0 | 398,035.8 | 27.00 |


INPUT: ROADWAYS

C:IClements Ferry TNMMBuild 2040rev

| INPUT: ROADWAYS |  |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | point1656 | 1656 | 2,341,957.8 | 395,663.5 | 30.00 |  |  |  | Average |  |
|  |  | point1657 | 1657 | 2,341,881.0 | 395,619.9 | 30.00 |  |  |  | Average |  |
|  |  | point1658 | 1658 | 2,341,837.0 | 395,597.7 | 30.00 |  |  |  | Average |  |
|  |  | point1659 | 1659 | 2,341,803.2 | 395,578.6 | 30.00 |  |  |  | Average |  |
|  |  | point1660 | 1660 | 2,341,691.8 | 395,522.0 | 30.00 |  |  |  | Average |  |
|  |  | point1661 | 1661 | 2,341,441.2 | 395,388.9 | 30.00 |  |  |  | Average |  |
|  |  | point1662 | 1662 | 2,340,720.0 | 394,972.2 | 30.00 |  |  |  |  |  |
| Point Hope Turnlane | 12.0 | point1670 | 1670 | 2,346,400.5 | 398,254.0 | 28.00 |  |  |  | Average |  |
|  |  | point1671 | 1671 | 2,346,670.2 | 398,303.6 | 28.00 |  |  |  | Average |  |
|  |  | point1672 | 1672 | 2,346,945.2 | 398,362.7 | 28.00 |  |  |  |  |  |
| EB Left Tumlane Point Hope | 12.0 | point1673 | 1673 | 2,346,550.2 | 398,314.9 | 28.00 |  |  |  | Average |  |
|  |  | point1674 | 1674 | 2,346,669.2 | 398,343.6 | 28.00 |  |  |  | Average |  |
|  |  | point1675 | 1675 | 2,346,902.5 | 398,394.9 | 29.00 |  |  |  | Average |  |
|  |  | point1676 | 1676 | 2,346,947.8 | 398,406.2 | 29.00 |  |  |  |  |  |
| WB Tum Point Hope | 12.0 | point1677 | 1677 | 2,347,679.5 | 398,596.1 | 30.00 |  |  |  | Average |  |
|  |  | point1678 | 1678 | 2,347,543.0 | 398,556.0 | 30.00 |  |  |  | Average |  |
|  |  | point1679 | 1679 | 2,347,396.8 | 398,518.6 | 30.00 |  |  |  | Average |  |
|  |  | point1680 | 1680 | 2,347,214.0 | 398,473.4 | 30.00 |  |  |  | Average |  |
|  |  | point1681 | 1681 | 2,347,080.0 | 398,436.8 | 29.00 |  |  |  |  |  |
| EB Left Turn East of Point Hope | 12.0 | point1682 | 1682 | 2,348,093.2 | 398,697.3 | 30.00 |  |  |  | Average |  |
|  |  | point1683 | 1683 | 2,348,157.8 | 398,723.4 | 30.00 |  |  |  | Average |  |
|  |  | point1684 | 1684 | 2,348,262.0 | 398,772.2 | 30.00 |  |  |  | Average |  |
|  |  | point1685 | 1685 | 2,348,327.2 | 398,800.0 | 30.00 |  |  |  | Average |  |
|  |  | point1686 | 1686 | 2,348,384.8 | 398,826.1 | 30.00 |  |  |  |  |  |
| EB Aux Lane | 12.0 | point1687 | 1687 | 2,348,040.2 | 398,642.5 | 30.00 |  |  |  | Average |  |
|  |  | point1688 | 1688 | 2,348,080.2 | 398,655.6 | 30.00 |  |  |  | Average |  |
|  |  | point1689 | 1689 | 2,348,173.2 | 398,689.5 | 30.00 |  |  |  | Average |  |
|  |  | point1690 | 1690 | 2,348,285.5 | 398,737.4 | 30.00 |  |  |  | Average |  |
|  |  | point1691 | 1691 | 2,348,350.8 | 398,767.8 | 30.00 |  |  |  | Average |  |
|  |  | point1692 | 1692 | 2,348,404.0 | 398,791.3 | 30.00 |  |  |  |  |  |
| WB Left Turn East of Point Hope | 12.0 | point1693 | 1693 | 2,348,738.5 | 399,040.5 | 30.00 |  |  |  | Average |  |
|  |  | point1694 | 1694 | 2,348,616.8 | 398,955.2 | 30.00 |  |  |  | Average |  |
|  |  | point1695 | 1695 | 2,348,510.5 | 398,890.8 | 30.00 |  |  |  |  |  |
| EB Right Tum Lane Nelliefield | 12.0 | point1696 | 1696 | 2,350,748.0 | 400,298.5 | 30.00 |  |  |  | Average |  |
|  |  | point1697 | 1697 | 2,350,774.0 | 400,316.8 | 30.00 |  |  |  | Average |  |
|  |  | point1698 | 1698 | 2,350,818.2 | 400,348.1 | 30.00 |  |  |  | Average |  |
|  |  | point1699 | 1699 | 2,350,843.5 | 400,366.3 | 30.00 |  |  |  | Average |  |
|  |  | point1700 | 1700 | 2,350,950.5 | 400,432.5 | 30.00 |  |  |  |  |  |


| INPUT: ROADWAYS |  |  |  |  |  |  | Clemen | Ferry Phas | 2 Wideni |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EB Left Turn Lane at Nelliefield | 12.0 | point1701 | 1701 | 2,350,681.8 | 400,292.4 | 30.00 |  |  |  | Average |  |
|  |  | point1702 | 1702 | 2,350,726.2 | 400,325.4 | 30.00 |  |  |  | Average |  |
|  |  | point1703 | 1703 | 2,350,748.8 | 400,342.8 | 31.00 |  |  |  | Average |  |
|  |  | point1704 | 1704 | 2,350,795.8 | 400,375.0 | 31.00 |  |  |  | Average |  |
|  |  | point1705 | 1705 | 2,350,821.8 | 400,389.8 | 31.00 |  |  |  | Average |  |
|  |  | point1706 | 1706 | 2,350,923.8 | 400,456.0 | 31.00 |  |  |  |  |  |
| EB Right Turn at the Penninsula | 12.0 | point1707 | 1707 | 2,351,175.5 | 400,565.9 | 31.00 |  |  |  | Average |  |
|  |  | point1708 | 1708 | 2,351,307.8 | 400,638.2 | 31.00 |  |  |  | Average |  |
|  |  | point1709 | 1709 | 2,351,423.5 | 400,696.4 | 31.00 |  |  |  |  |  |
| WB Left Turn at Nelliefield | 12.0 | point1710 | 1710 | 2,351,345.2 | 400,707.8 | 31.00 |  |  |  | Average |  |
|  |  | point1711 | 1711 | 2,351,285.2 | 400,671.2 | 31.00 |  |  |  | Average |  |
|  |  | point1712 | 1712 | 2,351,157.2 | 400,601.6 | 31.00 |  |  |  | Average |  |
|  |  | point1713 | 1713 | 2,351,079.8 | 400,558.1 | 31.00 |  |  |  | Average |  |
|  |  | point1714 | 1714 | 2,351,025.0 | 400,523.3 | 31.00 |  |  |  |  |  |
| WB Left Tum at Penninsula | 12.0 | point1715 | 1715 | 2,351,872.5 | 400,946.5 | 30.00 |  |  |  | Average |  |
|  |  | point1716 | 1716 | 2,351,847.2 | 400,933.5 | 30.00 |  |  |  | Average |  |
|  |  | point1717 | 1717 | 2,351,741.0 | 400,885.6 | 30.00 |  |  |  | Average |  |
|  |  | point1718 | 1718 | 2,351,617.5 | 400,831.7 | 31.00 |  |  |  | Average |  |
|  |  | point1719 | 1719 | 2,351,533.2 | 400,793.4 | 31.00 |  |  |  |  |  |
| EB Left Turn at River Reach | 12.0 | point1720 | 1720 | 2,352,859.5 | 401,441.5 | 26.00 |  |  |  | Average |  |
|  |  | point1721 | 1721 | 2,352,973.2 | 401,509.4 | 25.00 |  |  |  | Average |  |
|  |  | point1722 | 1722 | 2,353,035.8 | 401,543.3 | 25.00 |  |  |  | Average |  |
|  |  | point1723 | 1723 | 2,353,112.8 | 401,581.2 | 25.00 |  |  |  |  |  |
| WB LEft Tum at River Reach | 12.0 | point1724 | 1724 | 2,353,456.8 | 401,773.6 | 24.00 |  |  |  | Average |  |
|  |  | point1725 | 1725 | 2,353,378.5 | 401,727.9 | 24.00 |  |  |  | Average |  |
|  |  | point1726 | 1726 | 2,353,347.2 | 401,707.0 | 25.00 |  |  |  | Average |  |
|  |  | point1727 | 1727 | 2,353,229.8 | 401,647.0 | 25.00 |  |  |  |  |  |
| EB Left Turn at Cainhoy VIllage | 12.0 | point1728 | 1728 | 2,354,425.8 | 402,268.3 | 21.00 |  |  |  | Average |  |
|  |  | point1729 | 1729 | 2,354,506.5 | 402,314.0 | 21.00 |  |  |  | Average |  |
|  |  | point1730 | 1730 | 2,354,565.2 | 402,353.1 | 21.00 |  |  |  | Average |  |
|  |  | point1731 | 1731 | 2,354,669.8 | 402,407.9 | 20.00 |  |  |  | Average |  |
|  |  | point1732 | 1732 | 2,354,887.8 | 402,521.5 | 20.00 |  |  |  | Average |  |
|  |  | point1733 | 1733 | 2,355,009.0 | 402,578.9 | 20.00 |  |  |  |  |  |
| WB Left Turn at Cainhoy Village | 12.0 | point1734 | 1734 | 2,355,399.2 | 402,693.8 | 19.00 |  |  |  | Average |  |
|  |  | point1735 | 1735 | 2,355,343.2 | 402,680.8 | 19.00 |  |  |  | Average |  |
|  |  | point1736 | 1736 | 2,355,289.8 | 402,670,3 | 20.00 |  |  |  | Average |  |
|  |  | point1737 | 1737 | 2,355,190.5 | 402,642.9 | 20.00 |  |  |  | Average |  |
|  |  | point1738 | 1738 | 2,355,138.2 | 402,631.2 | 20.00 |  |  |  |  |  |


| WB Right Turn at Cainhoy Village | 12.0 | point1739 | 1739 | 2,355,378.5 | 402,721.2 | 19.00 |  |  |  | Average |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | point1740 | 1740 | 2,355,329.0 | 402,716.0 | 19.00 |  |  |  | Average |  |
|  |  | point1741 | 1741 | 2,355,274.0 | 402,704.2 | 19.00 |  |  |  | Average |  |
|  |  | point1742 | 1742 | 2,355,173,5 | 402,680.8 | 20.00 |  |  |  | Average |  |
|  |  | point1743 | 1743 | 2,355,126.5 | 402,669.0 | 20.00 |  |  |  |  |  |
| WB Left Turn at Oak Bluff | 12.0 | point1744 | 1744 | 2,357,353.8 | 402,409.2 | 16.00 |  |  |  | Average |  |
|  |  | point1745 | 1745 | 2,357,227.2 | 402,424.9 | 16.00 |  |  |  | Average |  |
|  |  | point1746 | 1746 | 2,357,149.0 | 402,438.0 | 16.00 |  |  |  | Average |  |
|  |  | point1747 | 1747 | 2,357,087.5 | 402,452.3 | 16.00 |  |  |  |  |  |
| EB Left Turn at Cainhoy | 12.0 | point1748 | 1748 | 2,357,723.2 | 402,344.0 | 16.00 |  |  |  | Average |  |
|  |  | point1749 | 1749 | 2,357,822.5 | 402,344.0 | 16.00 |  |  |  | Average |  |
|  |  | point1750 | 1750 | 2,358,000.0 | 402,361.0 | 16.00 |  |  |  | Average |  |
|  |  | point1751 | 1751 | 2,358,239,0 | 402,388.4 | 16.00 |  |  |  |  |  |
| EB Left Turn at Reflectance | 12.0 | point1752 | 1752 | 2,360,036.0 | 402,350.2 | 14.00 |  |  |  | Average |  |
|  |  | point1753 | 1753 | 2,360,157.5 | 402,346.3 | 14.00 |  |  |  | Average |  |
|  |  | point1754 | 1754 | 2,360,281.5 | 402,338.5 | 14.00 |  |  |  | Average |  |
|  |  | point1755 | 1755 | 2,360,425.0 | 402,332.0 | 14.00 |  |  |  |  |  |
| WB Right Turn at Bennington | 12.0 | point1756 | 1756 | 2,361,267.0 | 402,205.1 | 13.00 |  |  |  | Average |  |
|  |  | point1757 | 1757 | 2,361,222,8 | 402,227.3 | 13.00 |  |  |  | Average |  |
|  |  | point1758 | 1758 | 2,361,181.0 | 402,246.9 | 13.00 |  |  |  |  |  |
| WB Right Turn at SC 41 | 12.0 | point1759 | 1759 | 2,361,957.8 | 400,743.8 | 10.00 |  |  |  | Average |  |
|  |  | point1760 | 1760 | 2,361,964.2 | 400,789.4 | 10.00 |  |  |  | Average |  |
|  |  | point1761 | 1761 | 2,361,972.0 | 400,858.6 | 10.00 |  |  |  | Average |  |
|  |  | point1762 | 1762 | 2,361,980.0 | 400,930.4 | 10.00 |  |  |  | Average |  |
|  |  | point1763 | 1763 | 2,361,981.2 | 400,993. 1 | 10.00 |  |  |  | Average |  |
|  |  | point1764 | 1764 | 2,362,003.5 | 401,034.8 | 10.00 |  |  |  | Average |  |
|  |  | point1765 | 1765 | 2,362,028.2 | 401,062.2 | 10.00 |  |  |  | Average |  |
|  |  | point1766 | 1766 | 2,362,058.2 | 401,083.1 | 10.00 |  |  |  |  |  |
| EB Right Turn onto CF from SC 41 | 12.0 | point1767 | 1767 | 2,362,050.2 | 401,114.4 | 10.00 |  |  |  | Average |  |
|  |  | point1768 | 1768 | 2,362,019.0 | 401,107.9 | 10.00 |  |  |  | Average |  |
|  |  | point1769 | 1769 | 2,361,993.0 | 401,114.4 | 10.00 |  |  |  | Average |  |
|  |  | point1770 | 1770 | 2,361,973.2 | 401,128.8 | 10.00 |  |  |  | Average |  |
|  |  | point1771 | 1771 | 2,361,966.8 | 401,140.5 | 10.00 |  |  |  |  |  |
| WB Left Turn at Business | 12.0 | point1772 | 1772 | 2,345,624.5 | 398,125.4 | 27.00 |  |  |  | Average |  |
|  |  | point1773 | 1773 | 2,345,525.2 | 398,095.4 | 26.00 |  |  |  | Average |  |
|  |  | point1774 | 1774 | 2,345,439.0 | 398,071.9 | 26.00 |  |  |  | Average |  |
|  |  | point1775 | 1775 | 2,345,373.8 | 398,056.2 | 26.00 |  |  |  |  |  |
| WB Left Turn to Bradbury | 12.0 | point1776 | 1776 | 2,343,041.2 | 396,216.6 | 27.00 |  |  |  | Average |  |

## WB Right Tum to Jack Primus

## WB Left Turn to Royal Assembly





| INPUT: ROADWAYS |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1891 | 1891 | 2,350,113.5 | 399,959.2 | 30.00 |  |  | Average |  |
|  | point1892 | 1892 | 2,349,933.0 | 399,843.4 | 30.00 |  |  | Average |  |
|  | point1893 | 1893 | 2,349,730.5 | 399,718.3 | 30.00 |  |  | Average |  |
|  | point1894 | 1894 | 2,349,575.8 | 399,619.4 | 30.00 |  |  | Average |  |
|  | point1895 | 1895 | 2,349,488.2 | 399,564.9 | 30.00 |  |  | Average |  |
|  | point1896 | 1896 | 2,349,378.8 | 399,496.3 | 30.00 |  |  | Average |  |
|  | point1897 | 1897 | 2,349,301.0 | 399,446.2 | 30.00 |  |  | Average |  |
|  | point1898 | 1898 | 2,349,192.8 | 399,379.6 | 30.00 |  |  | Average |  |
|  | point1899 | 1899 | 2,349,042.0 | 399,284.1 | 30.00 |  |  | Average |  |
|  | point1900 | 1900 | 2,348,896.8 | 399,190.6 | 30.00 |  |  | Average |  |
|  | point1901 | 1901 | 2,348,724.0 | 399,083.6 | 30.00 |  |  | Average |  |
|  | point1902 | 1902 | 2,348,575.2 | 398,988.8 | 30.00 |  |  | Average |  |
|  | point1903 | 1903 | 2,348,474.5 | 398,927.4 | 30.00 |  |  | Average |  |
|  | point1904 | 1904 | 2,348,406.5 | 398,892.5 | 30.00 |  |  | Average |  |
|  | point1905 | 1905 | 2,348,292.2 | 398,838.0 | 30.00 |  |  | Average |  |
|  | point1906 | 1906 | 2,348,225.5 | 398,808.4 | 30.00 |  |  | Average |  |
|  | point1907 | 1907 | 2,348,121.2 | 398,766.7 | 30.00 |  |  | Average |  |
|  | point1908 | 1908 | 2,348,035.2 | 398,737.1 | 30.00 |  |  | Average |  |
|  | point1909 | 1909 | 2,347,920.2 | 398,704.1 | 30.00 |  |  | Average |  |
|  | point1910 | 1910 | 2,347,804.0 | 398,670.5 | 30.00 |  |  | Average |  |
|  | point1911 | 1911 | 2,347,664.0 | 398,636.2 | 30.00 |  |  | Average |  |
|  | point1912 | 1912 | 2,347,551.0 | 398,608.6 | 30.00 |  |  | Average |  |
|  | point1913 | 1913 | 2,347,392.5 | 398,568.8 | 30.00 |  |  | Average |  |
|  | point1914 | 1914 | 2,347,230.2 | 398,527.8 | 30.00 |  |  | Average |  |
|  | point1915 | 1915 | 2,347,081.0 | 398,490.8 | 29.00 |  |  | Average |  |
|  | point1916 | 1916 | 2,346,929.5 | 398,453.8 | 29.00 |  |  | Average |  |
|  | point1917 | 1917 | 2,346,789.8 | 398,418.8 | 29.00 |  |  | Average |  |
|  | point1918 | 1918 | 2,346,706.2 | 398,401.3 | 28.00 |  |  | Average |  |
|  | point1919 | 1919 | 2,346,629.0 | 398,385.8 | 28.00 |  |  | Average |  |
|  | point1920 | 1920 | 2,346,583.8 | 398,377.8 | 28.00 |  |  | Average |  |
|  | point1921 | 1921 | 2,346,487.0 | 398,360.3 | 28.00 |  |  | Average |  |
|  | point1922 | 1922 | 2,346,381.0 | 398,344.3 | 28.00 |  |  | Average |  |
|  | point1923 | 1923 | 2,346,290.0 | 398,326.1 | 28.00 |  |  | Average |  |
|  | point1924 | 1924 | 2,346,198.0 | 398,308.7 | 28.00 |  |  | Average |  |
|  | point1925 | 1925 | 2,346,142.0 | 398,297.2 | 28.00 |  |  | Average |  |
|  | point1926 | 1926 | 2,346,073.5 | 398,282.4 | 28.00 |  |  | Average |  |
|  | point1927 | 1927 | 2,345,982.0 | 398,260.2 | 27.00 |  |  | Average |  |
|  | point1928 | 1928 | 2,345,919.5 | 398,244.8 | 27.00 |  |  | Average |  |






INPUT: ROADWAYS


| point2081 | 2081 | $2,361,241.2$ | $402,125.2$ | 13.00 |
| :--- | :--- | :--- | :--- | :--- |
| point2082 | 2082 | $2,361,308.8$ | $402,084.4$ | 13.00 |
| point2083 | 2083 | $2,361,383.2$ | $402,033.8$ | 12.00 |
| point2084 | 2084 | $2,361,497.2$ | $401,943.4$ | 12.00 |
| point2085 | 2085 | $2,361,554.2$ | $401,881.4$ | 12.00 |
| point2086 | 2086 | $2,361,618.0$ | $401,805.7$ | 12.00 |
| point2087 | 2087 | $2,361,666.0$ | $401,742.9$ | 11.00 |
| point2088 | 2088 | $2,361,706.8$ | $401,680.2$ | 11.00 |
| point2089 | 2089 | $2,361,763.8$ | $401,575.2$ | 11.00 |
| point2090 | 2090 | $2,361,800.5$ | $401,493.8$ | 11.00 |
| point2091 | 2091 | $2,361,829.8$ | $401,420.4$ | 11.00 |
| point2092 | 2092 | $2,361,851.0$ | $401,338.9$ | 11.00 |
| point2093 | 2093 | $2,361,863.2$ | $401,291.6$ | 11.00 |
| point2094 | 2094 | $2,361,872.2$ | $401,248.4$ | 10.00 |
| point2095 | 2095 | $2,361,885.2$ | $401,160.4$ | 10.00 |


| Average |  |
| :--- | :--- |
| Average |  |
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| Average |  |

Clements Ferry Phase 2 Widening

| Three Oaks Engineering <br> H. Robbins | 22 March 2018 TNM 2.5 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INPUT: TRAFFIC FOR LAeq1h Volumes PROJECT/CONTRACT: <br> RUN: | Clements Ferry Phase 2 Widening Build 2040 |  |  |  |  |  |  |  |  |  |  |  |
| Roadway | Points |  |  |  |  |  |  |  |  |  |  |  |
| Name | Name | No. | Segment <br> Autos |  | MTrucks HTrucks |  |  |  | Buses |  | Motorcycles |  |
|  |  |  | V | S | V | S | V | S | V | S | V | S |
|  |  |  | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph | veh/hr | mph |
| EB Inside Lane | point833 | 833 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point834 | 834 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point835 | 835 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point836 | 836 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point837 | 837 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point838 | 838 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point839 | 839 | 1512 | 45 | 0 | 1 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point840 | 840 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point841 | 841 | 1512 | 45 | 0 | 1 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point842 | 842 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point843 | 843 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point844 | 844 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point845 | 845 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point846 | 846 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point847 | 847 | 1512 | 45 | 0 | - | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point848 | 848 | 1512 | 45 | 0 | , | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point849 | 849 | 1512 | 45 | 0 | 1 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point850 | 850 | 1512 | 45 | 0 | . | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point851 | 851 | 1512 | 45 | 0 | ! | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point852 | 852 | 1512 | 45 | 0 | 1 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point853 | 853 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point854 | 854 | 1512 | 45 | 0 | \| | 131 | 45 | 0 | 0 | 0 | 0 |



INPUT: TRAFFIC FOR LAeq1h Volumes


INPUT: TRAFFIC FOR LAeqih Volumes


INPUT: TRAFFIC FOR LAeqth Volumes

| 0 | O | O | O | 0 | $\bigcirc$ | － | － | O | 0 | O | 0 | O | 0 | 0 | 0 | 0 | 0 | － | － | 0 | O | 0 | 0 | － | 0 | 0 | O | 0 | O | O | － | － | － |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| － | － | － | － | $\bigcirc$ | $\bigcirc$ | － | － | － | － | － | － | － | － | 0 | － | － | － | － | － | $\bigcirc$ | － | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | O | 0 |
|  | 0 | － | － | － | － | 0 | － | 0 | － | O | － | － | 0 | － | － | － | 0 | 0 | 0 | － | 0 | 0 | 0 | 0 | 0 | 0 | － | $\bigcirc$ | － | － | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
| － | 0 | － | － | － | O | － | － | 0 | 0 | 0 | 0 | 0 | － | 0 | 0 | 0 | 0 | 0 | 0 | － | 0 | 0 | － | O | 0 | 0 | 0 | － | 0 | － | 0 | － | 0 |
| 4 | 18 | 4 | $\stackrel{4}{7}$ | 4 | $\frac{18}{7}$ | $\frac{0}{7}$ | $\frac{6}{8}$ | $\frac{10}{8}$ | 10 | 4 | $\stackrel{5}{9}$ | $4$ | 18 | $\frac{\log }{2}$ | $4$ | $\frac{1}{6}$ | 10 | $4$ | 4 | $4$ | $\stackrel{4}{7}$ | 4 | 4 | $4$ | $\stackrel{5}{7}$ | － | \％ | \％ | $\frac{5}{5}$ | 4 | $\frac{5}{4}$ | － | 19 |
| － | 5 | $\overline{5}$ | $\overline{5}$ | $\overline{5}$ | is | $\stackrel{\square}{6}$ | $\overline{5}$ | $\overline{5}$ | $\bar{m}$ | $\overline{5}$ | $\overline{5}$ | 5 | $\overline{0}$ | $\overline{5}$ | $\overline{5}$ | $\overline{5}$ | $\bar{\square}$ | $\stackrel{\square}{6}$ | $\stackrel{\square}{5}$ | － | $\overline{5}$ | $\bar{\sim}$ | $\bar{\sim}$ | $\overline{5}$ | $\bar{\square}$ | $\bar{\sim}$ | ธ | $\bar{\square}$ | $\overline{5}$ | $\bar{\sim}$ | $\bar{\sim}$ | $\bar{\square}$ | $\bar{\square}$ |
| 0 | 0 | $\bigcirc$ | － | 0 | － | － | $\bigcirc$ | － | $\bigcirc$ | $\bigcirc$ | － | － | － | － | 0 | 0 | $\bigcirc$ | 0 | 0 | $\bigcirc$ | － | 0 | － | $\bigcirc$ | O | O | O | O | O | O | － | 0 | 0 |
| O | O | O | － | 0 | O | 0 | 0 | 0 | $\bigcirc$ | － | － | － | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | － | 0 | 0 | 0 | 0 |
| 4 | 4 | 4） | 4 | 4 | 4 | 4 | \％ | 4 | \％ | $\frac{18}{8}$ | ＋ | $\frac{5}{8}$ | \％ | \％ | \％ | \％ | 18 | $\frac{18}{8}$ | $\stackrel{18}{7}$ | \％ | ¢ | $\stackrel{\square}{\text { ¢ }}$ | \％ | \％ | $\frac{n}{8}$ | $\frac{50}{2}$ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | $\frac{10}{8}$ | $\stackrel{10}{8}$ | W | \％ | \％ | － |
| $\begin{aligned} & \mathrm{N} \\ & \mathbf{O} \end{aligned}$ | $\begin{aligned} & \mathbf{~} \\ & \$ 0 \end{aligned}$ | $\begin{aligned} & \text { H } \\ & \text { © } \end{aligned}$ |  | $\begin{aligned} & \mathbf{4} \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { H } \\ & \stackrel{0}{6} \end{aligned}$ | $\begin{aligned} & \text { W } \\ & \text { W } \end{aligned}$ | 呂 | $\underset{\sim}{\text { Wi }}$ | $\begin{aligned} & \stackrel{4}{\mathbf{0}} \\ & \stackrel{0}{6} \end{aligned}$ | $\begin{array}{\|c} \mathbf{~} \\ \stackrel{0}{6} \end{array}$ | $\begin{aligned} & \mathbb{8} \\ & \stackrel{\sim}{0} \end{aligned}$ | $\begin{aligned} & \mathbf{~} \\ & \mathbf{U} \\ & \underset{\sim}{0} \end{aligned}$ | $\begin{aligned} & \text { W } \\ & \stackrel{0}{0} \end{aligned}$ | $\begin{aligned} & \text { 淢 } \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \text { 菏 } \\ & \stackrel{1}{2} \end{aligned}$ |  | $\begin{array}{\|c} \mathbf{W} \\ \mathbf{N} \\ \hline \end{array}$ | $\begin{aligned} & \text { I } \\ & \mathbf{N} \end{aligned}$ | $\begin{aligned} & \text { 寸 } \\ & \text { © } \end{aligned}$ | $\begin{aligned} & \mathbf{~} \\ & \stackrel{0}{6} \end{aligned}$ | $\begin{aligned} & \text { 女 } \\ & \stackrel{0}{6} \end{aligned}$ | $\begin{aligned} & \text { प } \\ & \mathbf{0} \end{aligned}$ | 范 | 䍜 | $\begin{aligned} & \text { U } \\ & \mathbf{0} \end{aligned}$ | $\underset{\sim}{\underset{\sim}{0}}$ | $\begin{aligned} & \pm \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { H } \\ & \stackrel{0}{0} \end{aligned}$ | $\begin{aligned} & \text { 罝 } \end{aligned}$ | $\begin{aligned} & \text { H } \\ & \stackrel{\rightharpoonup}{0} \end{aligned}$ | $\begin{aligned} & \text { U } \\ & \stackrel{\circ}{\circ} \end{aligned}$ | － |
| 茴 | $\underset{\sim}{\underset{\circ}{\otimes}}$ | 聐 | 名 | $\stackrel{8}{8}$ | 品 | 咨 | 哭 | 槀 | $8$ | $\overline{8}$ | $\overline{\mathrm{O}}$ | 응 | 응 | 응 | $8$ | 은 | 응 | $8$ | 은 | $\stackrel{\stackrel{\rightharpoonup}{ }}{\stackrel{\rightharpoonup}{2}}$ | $\frac{N}{\square}$ | $\frac{m}{6}$ | 흥 | $\frac{\infty}{9}$ | 응 | $\stackrel{N}{\underline{O}}$ | $\stackrel{\infty}{\bar{\circ}}$ | $\frac{\pi}{9}$ | 엉 | $\overline{\bar{N}}$ | $\underset{\sim}{N}$ | N | N |
|  |  |  | $\begin{aligned} & \text { 淢 } \\ & \stackrel{\rightharpoonup}{0} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { 吕 } \\ & 0 \\ & \stackrel{5}{0} \\ & \hline \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \bar{\circ} \\ & \frac{1}{2} \\ & \bar{Z} \end{aligned}$ |  | $\frac{\%}{0}$ |  | 迢 | 8 <br> ㅇㅡㅡㅡㅁ | $\frac{\stackrel{y}{0}}{\overline{1}}$ | $\frac{0}{8}$ |  | 은 | $\frac{\stackrel{\pi}{ㄷ}}{\frac{5}{c}}$ | $\begin{aligned} & \text { N } \\ & \dot{O} \\ & \underline{Z} \\ & \bar{Z} \end{aligned}$ | $\frac{m}{\bar{O}}$ | $\frac{\text { 立 }}{\frac{0}{U}}$ | $\begin{gathered} \text { n } \\ \frac{\Gamma}{7} \\ \bar{L} \\ \hline \end{gathered}$ | $\frac{\varphi}{\frac{1}{2}}$ | $\begin{aligned} & \text { n } \\ & \frac{0}{2} \\ & \dot{Z} \\ & \hline \end{aligned}$ | $\frac{\infty}{\frac{\infty}{ㄷ}}$ | $\frac{0}{0}$ |  | $\frac{\overline{\mathrm{N}}}{\overline{\mathrm{I}}}$ |  |  | 号 |


| INPUT: TRAFFIC | Clements Ferry Phase 2 Widening |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1025 | 1025 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1026 | 1026 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1027 | 1027 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1028 | 1028 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1029 | 1029 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1030 | 1030 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1031 | 1031 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1032 | 1032 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1033 | 1033 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1034 | 1034 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1035 | 1035 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1036 | 1036 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1037 | 1037 |  |  |  |  |  |  |  |  |  |  |
| EB Outside Lane | point1038 | 1038 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1039 | 1039 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1040 | 1040 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1041 | 1041 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1042 | 1042 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1043 | 1043 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1044 | 1044 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1045 | 1045 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1046 | 1046 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1047 | 1047 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1048 | 1048 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1049 | 1049 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1050 | 1050 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1051 | 1051 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1052 | 1052 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1053 | 1053 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1054 | 1054 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1055 | 1055 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1056 | 1056 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1057 | 1057 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1058 | 1058 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |




| INPUT: TRAFFIC FOR LAeqi h Volumes |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1127 | 1127 | 1512 | 45 | 0 | 0 | 131\| | 45 | 0 | 0 | 0 | 0 |
|  | point1128 | 1128 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1129 | 1129 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1130 | 1130 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1131 | 1131 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1132 | 1132 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1133 | 1133 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1134 | 1134 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1135 | 1135 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1136 | 1136 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1137 | 1137 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1138 | 1138 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1139 | 1139 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1140 | 1140 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1141 | 1141 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1142 | 1142 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1143 | 1143 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1144 | 1144 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1145 | 1145 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1146 | 1146 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1147 | 1147 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1148 | 1148 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1149 | 1149 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1150 | 1150 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1151 | 1151 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1152 | 1152 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1153 | 1153 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1154 | 1154 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1155 | 1155 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1156 | 1156 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1157 | 1157 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1158 | 1158 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1159 | 1159 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |
|  | point1160 | 1160 | 1399 | 45 | 0 | 0 | 122 | 45 | 0 | 0 | 0 | 0 |

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 point1176 $\stackrel{N}{N}$ $\stackrel{\infty}{7}$ $\stackrel{N}{2}$ point1180 point1181

 $\stackrel{\infty}{\stackrel{\infty}{2}}$
苞
 point1189

 point1193


| INPUT: TRAFFIC FOR LAeq1h Volum |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1263 | 1263 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1264 | 1264 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1265 | 1265 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1266 | 1266 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1267 | 1267 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0. | 0 |
|  | point1268 | 1268 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1269 | 1269 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1270 | 1270 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1271 | 1271 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1272 | 1272 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1273 | 1273 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1274 | 1274 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1275 | 1275 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1276 | 1276 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1277 | 1277 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1278 | 1278 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1279 | 1279 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1280 | 1280 | 1654 | 45 | 0 | 0 | 51. | 45 | 0 | 0 | 0 | 0 |
|  | point1281 | 1281 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1282 | 1282 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1283 | 1283 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1284 | 1284 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1285 | 1285 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1286 | 1286 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1287 | 1287 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1288 | 1288 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1289 | 1289 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1290 | 1290 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1291 | 1291 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1292 | 1292 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1293 | 1293 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1294 | 1294 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
| . | point1295 | 1295 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1296 | 1296 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |




| INPUT: TRAFFIC FOR LAeq1h Volumes |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1433 | 1433 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1434 | 1434 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1435 | 1435 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1436 | 1436 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1437 | 1437 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1438 | 1438 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1439 | 1439 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1440 | 1440 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1441 | 1441 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1442 | 1442 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1443 | 1443 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1444 | 1444 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1445 | 1445 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1446 | 1446 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1447 | 1447 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1448 | 1448 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1449 | 1449 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1450 | 1450 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1451 | 1451 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1452 | 1452 |  |  |  |  |  |  |  |  |  |  |
| WB Outside Lane | point1453 | 1453 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1454 | 1454 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1455 | 1455 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1456 | 1456 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1457 | 1457 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1458 | 1458 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1459 | 1459 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1460 | 1460 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1461 | 1461 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1462 | 1462 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1463 | 1463 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1464 | 1464 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1465 | 1465 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1466 | 1466 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
| C:IClements Ferry TNMIBuild 2040rev |  |  |  |  |  | 19 |  |  |  |  |  |  |


|  | point1467 | 1467 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1468 | 1468 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1469 | 1469 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1470 | 1470 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1471 | 1471 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 |  |
|  | point1472 | 1472 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1473 | 1473 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1474 | 1474 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1475 | 1475 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1476 | 1476 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1477 | 1477 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 |  |
|  | point1478 | 1478 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1479 | 1479 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1480 | 1480 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1481 | 1481 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1482 | 1482 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | . |
|  | point1483 | 1483 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1484 | 1484 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1485 | 1485 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1486 | 1486 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1487 | 1487 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1488 | 1488 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1489 | 1489 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1490 | 1490 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1491 | 1491 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1492 | 1492 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1493 | 1493 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1494 | 1494 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 |  |
|  | point1495 | 1495 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | - |
|  | point1496 | 1496 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 |  |
|  | point1497 | 1497 | 1654 | 45 | 0 | 0 | 51 | 45 | 0 | 0 | 0 | 0 |
|  | point1498 | 1498 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1499 | 1499 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 | 0 |
|  | point1500 | 1500 | 1602 | 45 | 0 | 0 | 121 | 45 | 0 | 0 | 0 |  |
| C:IClements Ferry TNMMBuild 2040rev |  |  |  |  |  | 20 |  |  |  |  |  |  |

Clements Ferry Phase 2 Widening

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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| INPUT: TRAFFIC FOR LAeq1 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | point1637 | 1637 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1638 | 1638 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1639 | 1639 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1640 | 1640 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1641 | 1641 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1642 | 1642 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1643 | 1643 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1644 | 1644 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1645 | 1645 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1646 | 1646 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1647 | 1647 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1648 | 1648 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1649 | 1649 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1650 | 1650 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1651 | 1651 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1652 | 1652 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1653 | 1653 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1654 | 1654 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1655 | 1655 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | - |
|  | point1656 | 1656 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1657 | 1657 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1658 | 1658 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1659 | 1659 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1660 | 1660 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1661 | 1661 | 1512 | 45 | 0 | 0 | 131 | 45 | 0 | 0 | 0 | 0 |
|  | point1662 | 1662 |  |  |  |  |  |  |  |  |  |  |
| Point Hope Turnlane | point1670 | 1670 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | point1671 | 1671 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | point1672 | 1672 |  |  |  |  |  |  |  |  |  |  |
| EB Left Turnlane Point Hope | point1673 | 1673 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | point1674 | 1674 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | point1675 | 1675 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | point1676 | 1676 |  |  |  |  |  |  |  |  |  |  |
| WB Turn Point Hope | point1677 | 1677 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |


| Clements Ferry Phase 2 Widening |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| point1678 | 1678 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1679 | 1679 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1680 | 1680 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1681 | 1681 |  |  |  |  |  |  |  |  |  |  |
| point1682 | 1682 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1683 | 1683 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1684 | 1684 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1685 | 1685 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1686 | 1686 |  |  |  |  |  |  |  |  |  |  |
| point1687 | 1687 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1688 | 1688 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1689 | 1689 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1690 | 1690 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1691 | 1691 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1692 | 1692 |  |  |  |  |  |  |  |  |  |  |
| point1693 | 1693 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1694 | 1694 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1695 | 1695 |  |  |  |  |  |  |  |  |  |  |
| point1696 | 1696 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1697 | 1697 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1698 | 1698 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1699 | 1699 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1700 | 1700 |  |  |  |  |  |  |  |  |  |  |
| point1701 | 1701 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1702 | 1702 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1703 | 1703 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1704 | 1704 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1705 | 1705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1706 | 1706 |  |  |  |  |  |  |  |  |  |  |
| point1707 | 1707 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1708 | 1708 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1709 | 1709 |  |  |  |  |  |  |  |  |  |  |
| point1710 | 1710 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| point1711 | 1711 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

INPUT: TRAFFIC FOR LAeq1h Volumes




Clements Ferry Phase 2 Widening


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INPUT: TRAFFIC FOR LAeq1h Volumes


$$
\begin{aligned}
& 00000000000000000000000000000000 \\
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& \sum_{N}^{0} 00000000000000000000000000000000000 \\
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\end{aligned}
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\begin{aligned}
& 000000000000000000000000000000000 \\
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\end{aligned}
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INPUT: TRAFFIC FOR LAeq1h Volumes
(a)
22 March 2018
TNM 2.5


Clements Ferry Phase 2 Widening

品

| INPUT: RECEIVERS |
| :--- |
| Receiver58 |
| Receiver59 |
| Receiver60 |
| Receiver61 |
| Receiver62 |
| Receiver63 |
| Receiver64 |
| Receiver65 |
| Receiver66 |
| Receiver67 |
| Receiver68 |
| Receiver69 |
| Receiver70 |
| Receiver71 |
| Receiver72 |
| Receiver73 |
| Receiver74 |
| Receiver75 |
| Receiver76 |
| Receiver77 |
| Receiver78 |
| Receiver79 |
| Receiver80 |
| Receiver81 |
| Receiver82 |
| Receiver83 |
| Receiver84 |
| Receiver85 |
| Receiver86 |
| Receiver87 |
| Receiver88 |
| Receiver89 |
| Receiver90 |
| Receiver91 |
| Receiver92 |
|  |


| INPUT: RECEIVERS |  |  |  |  |  |  | Clements Ferry Phase 2 Widening |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver93 | 93 | 8 | 2,346,600.0 | 397,119.8 | 25.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver94 | 94 | 8 | 2,346,600.0 | 397,114.3 | 25.00 | 14.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver95 | 95 | 8 | 2,346,600.0 | 397,105.2 | 25.00 | 24.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver96 | 96 | 8 | 2,346,863.8 | 397,020.9 | 18.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver97 | 97 | 8 | 2,346,863,8 | 397,011.8 | 18.00 | 14.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver98 | 98 | 8 | 2,346,863.8 | 397,004.4 | 18.00 | 24.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver99 | 99 | 1 | 2,346,929,5 | 397,222.4 | 23.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver100 | 100 | 1 | 2,347,072.5 | 397,193.1 | 20.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver101 | 101 | 1 | 2,347,087.0 | 397,550.9 | 19.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver102 | 102 | 1 | 2,347,012.0 | 397,532.6 | 19.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver103 | 103 | 1 | 2,346,920.5 | 397,552.8 | 19.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver104 | 104 | 1 | 2,346,849.0 | 397,611.4 | 28.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver105 | 105 | 1 | 2,346,830.8 | 397,812.9 | 27.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver 106 | 106 | 1 | 2,346,957.0 | 397,939.2 | 28.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver107 | 107 | 1 | 2,347,248.2 | 397,715.8 | 24.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver108 | 108 | 1 | 2,347,255.5 | 397,974.1 | 27.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver109 | 109 | 1 | 2,347,198.8 | 398,060.1 | 28.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver 110 | 110 | 1 | 2,347,198.8 | 398,372.2 | 29.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver 111 | 111 | 1 | 2,347,482.8 | 398,458.3 | 29.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver112 | 112 | 1 | 2,347,620.0 | 398,505.9 | 30.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver113 | 113 | 1 | 2,347,812.5 | 398,553.6 | 30.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver114 | 114 | 1 | 2,347,938.8 | 398,593.8 | 30.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver115 | 115 | 1 | 2,348,007.0 | 397,171.8 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver116 | 116 | 1 | 2,348,120.5 | 397,105.9 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver117 | 117 | 1 | 2,348,078.5 | 397,226.8 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver118 | 118 | 1 | 2,348,100.5 | 397,292.7 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver119 | 119 | 1 | 2,348,137.0 | 397,345.8 | 16.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver120 | 120 | 1 | 2,348,204.8 | 397,397.1 | 16.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver121 | 121 | 1 | 2,348,311.0 | 397,472.2 | 16.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver122 | 122 | 1 | 2,348,521.8 | 397,505.2 | 16.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver123 | 123 | 1 | 2,348,598.8 | 397,486.8 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver124 | 124 | 1 | 2,348,684.8 | 397,477.7 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver125 | 125 | 1 | 2,348,739.8 | 397,485.0 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver126 | 126 | 1 | 2,348,800.2 | 397,490.5 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver127 | 127 | 1 | 2,348,877.0 | 397,503.3 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |

Clements Ferry Phase 2 Widening

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 \begin{tabular}{l|l|l|}
\hline 1 \& $2,348,926.5$ \& $397,508.8$ <br>
\hline 1 \& $2,348,988.8$ \& $397,523.5$

 2，349，527．0 $\quad 398,591.6$ 2，350，843．2 $\quad 400,477,4$ 2，351，21．0 400，2053． $\begin{array}{lll}2,351,330.8 & 400,569.7\end{array}$ 

$2,351,605.5$ \& $400,042.2$

 

1 \& $2,351,645.8$ \& $399,758.3$
\end{tabular} $400,296.8$ 400，179．6

 400，454．3 400，390．2 $\stackrel{+}{1}$ 400，864．2 400，719．5 $400,928.3$

$400,745.2$ 400，939．3 400，904．5 400,6993 400，378．8 400，547．3 | 0 |
| :--- |
| 0 |
| 0 |
| 0 |
| 0 |
| 0 | | $i$ |
| :---: | $400,710.3$

$400,825.8$ $400,858.7$ 400，900．8
 $n$
0
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0
0
$i$
$i$
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$i$

> N 131 $\begin{array}{r}133 \\ 134\end{array}$ $\begin{array}{r}135 \\ 136 \\ \hline\end{array}$ 욲 140 142士 146 $\stackrel{\rightharpoonup}{\square}$
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Clements Ferry Phase 2 Widening







Clements Ferry Phase 2 Widening

Clements Ferry Phase 2 Widening

| INPUT: RECE |  |  |  |  |  |  |  | nts | Phas | deni |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver233 | 233 | 1 | 2,359,383.8 | 402,954.7 | 17.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver234 | 234 | 1 | 2,359,299.5 | 402,799.0 | 16.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver235 | 235 | 1 | 2,359,482.8 | 402,599.4 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver236 | 236 | 1 | 2,359,585,2 | 402,441.9 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver237 | 237 | 1 | 2,359,929.5 | 402,817.3 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver238 | 238 | 1 | 2,359,276.8 | 401,802.3 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver239 | 239 | 1 | 2,359,606.5 | 402,296.8 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver240 | 240 | 1 | 2,359,866.5 | 402,262.1 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver241 | 241 | 1 | 2,359,747.5 | 401,778.5 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver242 | 242 | 1 | 2,360,086.2 | 401,973.8 | 6.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver243 | 243 | 1 | 2,360,062.2 | 401,741.2 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver244 | 244 | 1 | 2,360,056.8 | 401,424.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver245 | 245 | 1 | 2,360,309.5 | 401,199.0 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver246 | 246 | 1 | 2,360,269.2 | 401,374.8 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver247 | 247 | 1 | 2,360,362.8 | 401,558.0 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver248 | 248 | 1 | 2,360,346.2 | 401,697.2 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver249 | 249 | 1 | 2,360,381.0 | 401,880,3 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver250 | 250 | 1 | 2,360,364.5 | 402,014.1 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver251 | 251 | 1 | 2,360,353.5 | 402,246.7 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver252 | 252 | 1 | 2,360,632.0 | 402,203.4 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver253 | 253 | 1 | 2,360,585.5 | 401,870.1 | 14.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver254 | 254 | 1 | 2,360,596.5 | 401,456.2 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver255 | 255 | 1 | 2,360,777.8 | 401,388.4 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver256 | 256 | 1 | 2,361,138.8 | 401,364.9 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver257 | 257 | 1 | 2,361,353.0 | 400,989.5 | 10.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver258 | 258 | 1 | 2,361,373.0 | 401,262.4 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver259 | 259 | 1 | 2,361,400.5 | 401,720.3 | 11.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver260 | 260 | 1 | 2,361,129.5 | 401,685.5 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver261 | 261 | 1 | 2,360,944.5 | 401,813.7 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver262 | 262 | 1 | 2,360,755.8 | 401,813.7 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver263 | 263 | 1 | 2,360,895.0 | 402,208.9 | 12.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver264 | 264 | 1 | 2,360,680.8 | 402,408.6 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver265 | 265 | 1 | 2,360,750.2 | 402,392.1 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver266 | 266 | 1 | 2,360,801.8 | 402,578.9 | 13.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |
| Receiver267 | 267 | 1 | 2,361,001.2 | 402,694.3 | 15.00 | 4.92 | 0.00 | 66 | 10.0 | 8.0 |



| Receiver1 | 1 | 8 | 0 | 54 | 66 | 54 | 10 ---- | 54 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver2" | 2 | 8 | 0 | 57.2 | 66 | 57.2 | 10 ---- | 57.2 |
| Receiver3" | 3 | 8 | 0 | 58.1 | 66 | 58.1 | 10 ---- | 58.1 |
| Receiver4" | 4 | 8 | 0 | 52.3 | 66 | 52.3 | 10 ---- | 52.3 |
| Receiver5" | 5 | 8 | 0 | 55.6 | 66 | 55.6 | 10 ---- | 55.6 |
| Receiver6" | 6 | 8 | 0 | 56.6 | 66 | 56.6 | 10 ---- | 56.6 |
| Receiver7" | 7 | 8 | 0 | 54.1 | 66 | 54.1 | 10 ---- | 54.1 |
| Receiver8" | 8 | 8 | 0 | 57.3 | 66 | 57.3 | 10 ---- | 57.3 |
| Receiver9" | 9 | 8 | 0 | 58.2 | 66 | 58.2 | 10 ---- | 58.2 |
| Receiver10 | 10 | 24 | 0 | 56 | 66 | 56 | 10 ---- | 56 |
| Receiver11 | 11 | 24 | 0 | 56.7 | 66 | 56.7 | 10 ---- | 56.7 |
| Receiver12 | 12 | 24 | 0 | 58.7 | 66 | 58.7 | 10 ---- | 58.7 |
| Receiver13 | 13 | 1 | 0 | 60 | 66 | 60 | 10 ---- | 60 |
| Receiver14 | 14 | 1 | 0 | 75.1 | 66 | 75.1 | 10 Snd Lvl | 75.1 |
| Receiver15 | 15 | 1 | 0 | 66.4 | 66 | 66.4 | 10 Snd Lvl | 66.4 |
| Receiver16 | 16 | 1 | 0 | 69.3 | 66 | 69.3 | 10 Snd Lvl | 69.3 |
| Receiver17 | 17 | 1 | 0 | 72.1 | 66 | 72.1 | 10 Snd Lvl | 72.1 |
| Receiver18 | 18 | 1 | 0 | 71.3 | 66 | 71.3 | 10 Snd Lvl | 71.3 |
| Receiver19 | 19 | 5 | 0 | 70.9 | 66 | 70.9 | 10 Snd Lvl | 70.9 |
| Receiver20 | 20 | 1 | 0 | 75.4 | 66 | 75.4 | 10 Snd Lvl | 75.4 |
| Receiver21 | 21 | 2 | 0 | 74.6 | 66 | 74.6 | 10 Snd Lvl | 74.6 |
| Receiver22 | 22 | 1 | 0 | 62.7 | 66 | 62.7 | 10 ---- | 62.7 |
| Receiver23 | 23 | 1 | 0 | 61.2 | 66 | 61.2 | 10 ---- | 61.2 |
| Receiver24 | 24 | 1 | 0 | 59 | 66 | 59 | 10 ---- | 59 |
| Receiver25 | 25 | 1 | 0 | 58.3 | 66 | 58.3 | 10 ---- | 58.3 |
| Receiver26 | 26 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver27 | 27 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver28 | 28 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver29 | 29 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver30 | 30 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver31 | 31 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver32 | 32 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver33 | 33 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver34 | 34 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver35 | 35 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver36 | 36 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver37 | 37 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver38 | 38 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver39 | 39 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver40 | 40 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver41 | 41 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver42 | 42 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver43 | 43 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver44 | 44 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver45 | 45 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver46 | 46 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |
| Receiver47 | 47 | 1 | 0 inactive |  | 66 inactive |  | 10 inactive | inactive |


| Receiver1 | 1 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver2" | 2 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver3" | 3 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver4" | 4 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver5" | 5 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver6" | 6 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver7" | 7 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver8" | 8 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver9" | 9 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 10 | 24 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 11 | 24 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 12 | 24 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 13 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 14 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 15 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 16 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 17 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 18 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 19 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver20 | 20 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver21 | 21 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver22 | 22 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver23 | 23 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver24 | 24 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver25 | 25 | 1 | 058.3 | 6658.3 | 10 ---- | 58.3 |
| Receiver26 | 26 | 1 | $0 \quad 58.1$ | $66 \quad 58.1$ | 10 ---- | 58.1 |
| Receiver27 | 27 | 1 | 056.9 | 6656.9 | 10 ---- | 56.9 |
| Receiver28 | 28 | 1 | 055.3 | 6655.3 | 10 ---- | 55.3 |
| Receiver29 | 29 | 1 | $0 \quad 56$ | $66 \quad 56$ | 10 ---- | 56 |
| Receiver30 | 30 | 1 | 054.5 | 6654.5 | 10 ---- | 54.5 |
| Receiver31 | 31 | 1 | $0 \quad 56.3$ | $66 \quad 56.3$ | 10 ---- | 56.3 |
| Receiver32 | 32 | 1 | $0 \quad 54.7$ | $66 \quad 54.7$ | 10 ---- | 54.7 |
| Receiver33 | 33 | 1 | 074.9 | $66 \quad 74.9$ | 10 Snd Lvl | 74.9 |
| Receiver34 | 34 | 1 | 071.7 | $66 \quad 71.7$ | 10 Snd Lvl | 71.7 |
| Receiver35 | 35 | 1 | $0 \quad 65.1$ | $66 \quad 65.1$ | 10 ---- | 65.1 |
| Receiver36 | 36 | 1 | $0 \quad 70.2$ | $66 \quad 70.2$ | 10 Snd Lvl | 70.2 |
| Receiver37 | 37 | 1 | $0 \quad 60.5$ | $66 \quad 60.5$ | 10 ---- | 60.5 |
| Receiver38 | 38 | 1 | $0 \quad 65.3$ | $66 \quad 65.3$ | 10 ---- | 65.3 |
| Receiver39 | 39 | 1 | 067.7 | $66 \quad 67.7$ | 10 Snd Lvl | 67.7 |
| Receiver40 | 40 | 1 | $0 \quad 75.4$ | $66 \quad 75.4$ | 10 Snd Lvl | 75.4 |
| Receiver41 | 41 | 1 | $0 \quad 75.6$ | $66 \quad 75.6$ | 10 Snd Lvl | 75.6 |
| Receiver42 | 42 | 1 | $0 \quad 75.4$ | $66 \quad 75.4$ | 10 Snd Lvl | 75.4 |
| Receiver43 | 43 | 1 | $0 \quad 67.1$ | $66 \quad 67.1$ | 10 Snd Lvl | 67.1 |
| Receiver44 | 44 | 1 | 066.1 | $66 \quad 66.1$ | 10 Snd Lvl | 66.1 |
| Receiver45 | 45 | 1 | $0 \quad 73.2$ | $66 \quad 73.2$ | 10 Snd Lvl | 73.2 |
| Receiver46 | 46 | 1 | 080.1 | $66 \quad 80.1$ | 10 Snd Lvl | 80.1 |
| Receiver47 | 47 | 1 | 080.4 | $66 \quad 80.4$ | 10 Snd Lvl | 80.4 |


| Receiver48 | 48 | 1 | $0 \quad 79.9$ | $66 \quad 79.9$ | 10 Snd Lvl | 79.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver49 | 49 | 1 | $0 \quad 62.4$ | $66 \quad 62.4$ | 10 ---- | 62.4 |
| Receiver50 | 50 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver51 | 51 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver52 | 52 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver53 | 53 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver54 | 54 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver55 | 55 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver56 | 56 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver57 | 57 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver58 | 58 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver59 | 59 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver60 | 60 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver61 | 61 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver62 | 62 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver63 | 63 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver64 | 64 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver65 | 65 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver66 | 66 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver67 | 67 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver68 | 68 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver69 | 69 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver70 | 70 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver71 | 71 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver72 | 72 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver73 | 73 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver74 | 74 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver75 | 75 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver76 | 76 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver77 | 77 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver78 | 78 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver79 | 79 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver80 | 80 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver81 | 81 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver82 | 82 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver83 | 83 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver84 | 84 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver85 | 85 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver86 | 86 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver87 | 87 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver88 | 88 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver89 | 89 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver90 | 90 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver91 | 91 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver92 | 92 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver93 | 93 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver94 | 94 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver48 | 48 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver49 | 49 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver50 | 50 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver51 | 51 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver52 | 52 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver53 | 53 | 1 | $0 \quad 63.9$ | $66 \quad 63.9$ | 10 ---- | 63.9 |
| Receiver54 | 54 | 1 | $0 \quad 66.2$ | $66 \quad 66.2$ | 10 Snd Lvl | 66.2 |
| Receiver55 | 55 | 1 | 062 | $66 \quad 62$ | 10 ---- | 62 |
| Receiver56 | 56 | 1 | $0 \quad 63$ | $66 \quad 63$ | 10 ---- | 63 |
| Receiver57 | 57 | 1 | $0 \quad 67.1$ | $66 \quad 67.1$ | 10 Snd Lvl | 67.1 |
| Receiver58 | 58 | 1 | $0 \quad 66.6$ | $66 \quad 66.6$ | 10 Snd Lvl | 66.6 |
| Receiver59 | 59 | 1 | $0 \quad 63.2$ | $66 \quad 63.2$ | 10 ---- | 63.2 |
| Receiver60 | 60 | 1 | $0 \quad 62$ | $66 \quad 62$ | 10 ---- | 62 |
| Receiver61 | 61 | 1 | 066 | $66 \quad 66$ | 10 Snd Lvl | 66 |
| Receiver62 | 62 | 1 | $0 \quad 69$ | $66 \quad 69$ | 10 Snd Lvl | 69 |
| Receiver63 | 63 | 1 | $0 \quad 72$ | $66 \quad 72$ | 10 Snd Lvl | 72 |
| Receiver64 | 64 | 1 | $0 \quad 61.4$ | $66 \quad 61.4$ | 10 ---- | 61.4 |
| Receiver65 | 65 | 1 | $0 \quad 63.8$ | $66 \quad 63.8$ | 10 ---- | 63.8 |
| Receiver66 | 66 | 1 | $0 \quad 71$ | $66 \quad 71$ | 10 Snd Lvl | 71 |
| Receiver67 | 67 | 1 | $0 \quad 60.4$ | $66 \quad 60.4$ | 10 ---- | 60.4 |
| Receiver68 | 68 | 1 | $0 \quad 68.6$ | $66 \quad 68.6$ | 10 Snd Lvl | 68.6 |
| Receiver69 | 69 | 1 | $0 \quad 64$ | $66 \quad 64$ | 10 ---- | 64 |
| Receiver70 | 70 | 1 | $0 \quad 66.4$ | $66 \quad 66.4$ | 10 Snd Lvl | 66.4 |
| Receiver71 | 71 | 1 | $0 \quad 77.5$ | $66 \quad 77.5$ | 10 Snd Lvl | 77.5 |
| Receiver72 | 72 | 1 | $0 \quad 72.6$ | $66 \quad 72.6$ | 10 Snd Lvl | 72.6 |
| Receiver73 | 73 | 1 | $0 \quad 76.3$ | $66 \quad 76.3$ | 10 Snd Lvl | 76.3 |
| Receiver74 | 74 | 1 | $0 \quad 76.6$ | $66 \quad 76.6$ | 10 Snd Lvl | 76.6 |
| Receiver75 | 75 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver76 | 76 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver77 | 77 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver78 | 78 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver79 | 79 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver80 | 80 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver81 | 81 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver82 | 82 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver83 | 83 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver84 | 84 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver85 | 85 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver86 | 86 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver87 | 87 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver88 | 88 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver89 | 89 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver90 | 90 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver91 | 91 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver92 | 92 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver93 | 93 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver94 | 94 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver48 | 48 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver49 | 49 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver50 | 50 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver51 | 51 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver52 | 52 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver53 | 53 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver54 | 54 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver55 | 55 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver56 | 56 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver57 | 57 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver58 | 58 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver59 | 59 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver60 | 60 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver61 | 61 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver62 | 62 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver63 | 63 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver64 | 64 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver65 | 65 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver66 | 66 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver67 | 67 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver68 | 68 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver69 | 69 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver70 | 70 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver71 | 71 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver72 | 72 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver73 | 73 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver74 | 74 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver75 | 75 | 1 | 064.5 | $66 \quad 64.5$ | 10 ---- | 64.5 |
| Receiver76 | 76 | 1 | $0 \quad 59.1$ | 6659.1 | 10 ---- | 59.1 |
| Receiver77 | 77 | 8 | 055.5 | 6655.5 | 10 ---- | 55.5 |
| Receiver78 | 78 | 8 | 058.5 | 6658.5 | 10 ---- | 58.5 |
| Receiver79 | 79 | 8 | $0 \quad 59.7$ | $66 \quad 59.7$ | 10 ---- | 59.7 |
| Receiver80 | 80 | 8 | $0 \quad 53.3$ | 6653.3 | 10 ---- | 53.3 |
| Receiver81 | 81 | 8 | $0 \quad 56.4$ | 6656.4 | 10 ---- | 56.4 |
| Receiver82 | 82 | 8 | $0 \quad 57.3$ | 6657.3 | 10 ---- | 57.3 |
| Receiver83 | 83 | 1 | 053 | 6653 | 10 ---- | 53 |
| Receiver84 | 84 | 1 | 052 | 6652 | 10 ---- | 52 |
| Receiver85 | 85 | 1 | $0 \quad 51.4$ | 6651.4 | 10 ---- | 51.4 |
| Receiver86 | 86 | 1 | 050.5 | 6650.5 | 10 ---- | 50.5 |
| Receiver87 | 87 | 1 | 050.9 | 6650.9 | 10 ---- | 50.9 |
| Receiver88 | 88 | 1 | 050.8 | 6650.8 | 10 ---- | 50.8 |
| Receiver89 | 89 | 8 | $0 \quad 51.5$ | $66 \quad 51.5$ | 10 ---- | 51.5 |
| Receiver90 | 90 | 8 | $0 \quad 54.8$ | 6654.8 | 10 ---- | 54.8 |
| Receiver91 | 91 | 8 | 055.9 | 6655.9 | 10 ---- | 55.9 |
| Receiver92 | 92 | 1 | 051.8 | $66 \quad 51.8$ | 10 ---- | 51.8 |
| Receiver93 | 93 | 8 | $0 \quad 52.1$ | 6652.1 | 10 ---- | 52.1 |
| Receiver94 | 94 | 8 | 055.5 | 6655.5 | 10 ---- | 55.5 |


| Receiver95 | 95 | 8 | $0 \quad 56.5$ | 6656.5 | 10 ---- | 56.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver96 | 96 | 8 | $0 \quad 52.2$ | 6652.2 | 10 ---- | 52.2 |
| Receiver97 | 97 | 8 | $0 \quad 54.3$ | 6654.3 | 10 ---- | 54.3 |
| Receiver98 | 98 | 8 | 055.4 | 6655.4 | 10 ---- | 55.4 |
| Receiver99 | 99 | 1 | $0 \quad 52.4$ | 6652.4 | 10 ---- | 52.4 |
| Receiver10 | 100 | 1 | $0 \quad 52.7$ | $66 \quad 52.7$ | 10 ---- | 52.7 |
| Receiver10 | 101 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 102 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 103 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 104 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 105 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 106 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 107 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 108 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 109 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 110 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 111 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 112 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 113 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 114 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 115 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 116 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 117 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 118 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 119 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 120 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 121 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 122 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 123 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 124 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 125 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 126 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 127 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 128 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 129 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 130 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 131 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 132 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 133 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 134 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 135 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 136 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 137 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 138 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 139 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 140 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 141 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver95 | 95 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver96 | 96 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver97 | 97 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver98 | 98 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver99 | 99 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 100 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 101 | 1 | 056.3 | 6656.3 | 10 ---- | 56.3 |
| Receiver10 | 102 | 1 | $0 \quad 56.1$ | 6656.1 | 10 ---- | 56.1 |
| Receiver10 | 103 | 1 | 056.5 | 6656.5 | 10 ---- | 56.5 |
| Receiver10 | 104 | 1 | $0 \quad 56.4$ | 6656.4 | 10 ---- | 56.4 |
| Receiver10 | 105 | 1 | $0 \quad 59.5$ | 6659.5 | 10 ---- | 59.5 |
| Receiver10 | 106 | 1 | $0 \quad 61.4$ | $66 \quad 61.4$ | 10 ---- | 61.4 |
| Receiver10 | 107 | 1 | $0 \quad 56.7$ | $66 \quad 56.7$ | 10 ---- | 56.7 |
| Receiver10 | 108 | 1 | 060.7 | $66 \quad 60.7$ | 10 ---- | 60.7 |
| Receiver10 | 109 | 1 | $0 \quad 62.6$ | $66 \quad 62.6$ | 10 ---- | 62.6 |
| Receiver11 | 110 | 1 | $0 \quad 72.9$ | $66 \quad 72.9$ | 10 Snd Lvl | 72.9 |
| Receiver11 | 111 | 1 | $0 \quad 74.2$ | $66 \quad 74.2$ | 10 Snd Lvl | 74.2 |
| Receiver11 | 112 | 1 | $0 \quad 75.9$ | $66 \quad 75.9$ | 10 Snd Lvl | 75.9 |
| Receiver11 | 113 | 1 | $0 \quad 75.9$ | $66 \quad 75.9$ | 10 Snd Lvl | 75.9 |
| Receiver11 | 114 | 1 | $0 \quad 76.9$ | $66 \quad 76.9$ | 10 Snd Lvl | 76.9 |
| Receiver11 | 115 | 1 | 052.5 | $66 \quad 52.5$ | 10 ---- | 52.5 |
| Receiver11 | 116 | 1 | $0 \quad 52.1$ | 6652.1 | 10 ---- | 52.1 |
| Receiver11 | 117 | 1 | 052.7 | 6652.7 | 10 ---- | 52.7 |
| Receiver11 | 118 | 1 | $0 \quad 53.1$ | $66 \quad 53.1$ | 10 ---- | 53.1 |
| Receiver11 | 119 | 1 | 053 | $66 \quad 53$ | 10 ---- | 53 |
| Receiver12 | 120 | 1 | $0 \quad 53.2$ | 6653.2 | 10 ---- | 53.2 |
| Receiver12 | 121 | 1 | 053.5 | $66 \quad 53.5$ | 10 ---- | 53.5 |
| Receiver12 | 122 | 1 | $0 \quad 53.2$ | $66 \quad 53.2$ | 10 ---- | 53.2 |
| Receiver12 | 123 | 1 | 053 | 6653 | 10 ---- | 53 |
| Receiver12 | 124 | 1 | 053 | 6653 | 10 ---- | 53 |
| Receiver12 | 125 | 1 | $0 \quad 52.8$ | 6652.8 | 10 ---- | 52.8 |
| Receiver12 | 126 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 127 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 128 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 129 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 130 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 131 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 132 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 133 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 134 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 135 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 136 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 137 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 138 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver13 | 139 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 140 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 141 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver95 | 95 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver96 | 96 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver97 | 97 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver98 | 98 | 8 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver99 | 99 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 100 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 101 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 102 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 103 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 104 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 105 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 106 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 107 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 108 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver10 | 109 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 110 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 111 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 112 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 113 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 114 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 115 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 116 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 117 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 118 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver11 | 119 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 120 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 121 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 122 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 123 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 124 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver12 | 125 | 1 | 052.8 | 6652.8 | 10 ---- | 52.8 |
| Receiver12 | 126 | 1 | $0 \quad 53$ | 6653 | 10 ---- | 53 |
| Receiver12 | 127 | 1 | 052.8 | 6652.8 | 10 ---- | 52.8 |
| Receiver12 | 128 | 1 | 052.7 | 6652.7 | 10 ---- | 52.7 |
| Receiver12 | 129 | 1 | $0 \quad 52.6$ | 6652.6 | 10 ---- | 52.6 |
| Receiver13 | 130 | 1 | 057.8 | 6657.8 | 10 ---- | 57.8 |
| Receiver13 | 131 | 1 | $0 \quad 77.3$ | $66 \quad 77.3$ | 10 Snd Lvl | 77.3 |
| Receiver13 | 132 | 1 | $0 \quad 64.5$ | $66 \quad 64.5$ | 10 ---- | 64.5 |
| Receiver13 | 133 | 1 | $0 \quad 65.3$ | $66 \quad 65.3$ | 10 ---- | 65.3 |
| Receiver13 | 134 | 1 | $0 \quad 72$ | $66 \quad 72$ | 10 Snd Lvl | 72 |
| Receiver13 | 135 | 1 | 057.7 | 6657.7 | 10 ---- | 57.7 |
| Receiver13 | 136 | 1 | $0 \quad 54.2$ | $66 \quad 54.2$ | 10 ---- | 54.2 |
| Receiver13 | 137 | 6 | $0 \quad 57.9$ | 6657.9 | 10 ---- | 57.9 |
| Receiver13 | 138 | 3 | $0 \quad 55.9$ | 6655.9 | 10 ---- | 55.9 |
| Receiver13 | 139 | 5 | 057.8 | 6657.8 | 10 ---- | 57.8 |
| Receiver14 | 140 | 4 | 055.8 | 6655.8 | 10 ---- | 55.8 |
| Receiver14 | 141 | 5 | 057.8 | 6657.8 | 10 ---- | 57.8 |


| Receiver14 | 142 | 2 | $0 \quad 55.8$ | 6655.8 | 10 ---- | 55.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver14 | 143 | 1 | $0 \quad 55.1$ | 6655.1 | 10 ---- | 55.1 |
| Receiver14 | 144 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 145 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 146 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 147 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 148 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 149 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 150 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 151 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 152 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 153 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 154 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 155 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 156 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 157 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 158 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 159 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 160 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 161 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 162 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 163 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 164 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 165 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 166 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 167 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 168 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 169 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 170 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 171 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 172 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 173 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 174 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 175 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 176 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 177 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 178 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 179 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 180 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 181 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 182 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 183 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 184 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 185 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 186 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 187 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 188 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver14 | 142 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver14 | 143 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 144 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 145 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 146 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 147 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 148 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 149 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 150 | 5 | $0 \quad 56.6$ | 6656.6 | 10 ---- | 56.6 |
| Receiver15 | 151 | 4 | $0 \quad 54.9$ | 6654.9 | 10 ---- | 54.9 |
| Receiver15 | 152 | 3 | $0 \quad 54.1$ | 6654.1 | 10 ---- | 54.1 |
| Receiver15 | 153 | 1 | 052 | 6652 | 10 ---- | 52 |
| Receiver15 | 154 | 1 | $0 \quad 51.6$ | 6651.6 | 10 ---- | 51.6 |
| Receiver15 | 155 | 1 | $0 \quad 52.2$ | 6652.2 | 10 ---- | 52.2 |
| Receiver15 | 156 | 1 | $0 \quad 52.3$ | 6652.3 | 10 ---- | 52.3 |
| Receiver15 | 157 | 1 | $0 \quad 51.9$ | 6651.9 | 10 ---- | 51.9 |
| Receiver15 | 158 | 5 | $0 \quad 54.6$ | 6654.6 | 10 ---- | 54.6 |
| Receiver15 | 159 | 2 | $0 \quad 54.2$ | 6654.2 | 10 ---- | 54.2 |
| Receiver16 | 160 | 2 | $0 \quad 54$ | 6654 | 10 ---- | 54 |
| Receiver16 | 161 | 5 | $0 \quad 56.5$ | 6656.5 | 10 ---- | 56.5 |
| Receiver16 | 162 | 5 | $0 \quad 56.5$ | 6656.5 | 10 ---- | 56.5 |
| Receiver16 | 163 | 4 | 055.5 | 6655.5 | 10 ---- | 55.5 |
| Receiver16 | 164 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 165 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 166 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 167 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 168 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 169 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 170 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 171 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 172 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 173 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 174 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 175 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 176 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 177 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 178 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 179 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 180 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 181 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 182 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 183 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 184 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 185 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 186 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 187 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 188 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver14 | 142 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver14 | 143 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 144 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 145 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 146 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 147 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 148 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 149 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 150 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 151 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 152 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 153 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 154 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 155 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 156 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 157 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 158 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 159 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 160 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 161 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 162 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 163 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 164 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 165 | 6 | 058.9 | 6658.9 | 10 ---- | 58.9 |
| Receiver16 | 166 | 4 | 059 | 6659 | 10 ---- | 59 |
| Receiver16 | 167 | 5 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver16 | 168 | 5 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver16 | 169 | 5 | $0 \quad 59.2$ | 6659.2 | 10 ---- | 59.2 |
| Receiver17 | 170 | 5 | $0 \quad 59.3$ | 6659.3 | 10 ---- | 59.3 |
| Receiver17 | 171 | 1 | 072.5 | $66 \quad 72.5$ | 10 Snd Lvl | 72.5 |
| Receiver17 | 172 | 1 | $0 \quad 69.6$ | $66 \quad 69.6$ | 10 Snd Lvl | 69.6 |
| Receiver17 | 173 | 1 | 066.7 | $66 \quad 66.7$ | 10 Snd Lvl | 66.7 |
| Receiver17 | 174 | 1 | 066 | $66 \quad 66$ | 10 Snd Lvl | 66 |
| Receiver17 | 175 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 176 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 177 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 178 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 179 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 180 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 181 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 182 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 183 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 184 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 185 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 186 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 187 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver18 | 188 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |


| Receiver14 | 142 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver14 | 143 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 144 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 145 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 146 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 147 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 148 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver14 | 149 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 150 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 151 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 152 | 3 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 153 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 154 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 155 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 156 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 157 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 158 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver15 | 159 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 160 | 2 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 161 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 162 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 163 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 164 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 165 | 6 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 166 | 4 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 167 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 168 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver16 | 169 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 170 | 5 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 171 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 172 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 173 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 174 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver17 | 175 | 1 | $0 \quad 63.9$ | $66 \quad 63.9$ | 10 ---- | 63.9 |
| Receiver17 | 176 | 1 | $0 \quad 62.8$ | $66 \quad 62.8$ | 10 ---- | 62.8 |
| Receiver17 | 177 | 1 | $0 \quad 62.1$ | $66 \quad 62.1$ | 10 ---- | 62.1 |
| Receiver17 | 178 | 1 | $0 \quad 61.4$ | $66 \quad 61.4$ | 10 ---- | 61.4 |
| Receiver17 | 179 | 1 | $0 \quad 60.5$ | $66 \quad 60.5$ | 10 ---- | 60.5 |
| Receiver18 | 180 | 1 | $0 \quad 59.6$ | 6659.6 | 10 ---- | 59.6 |
| Receiver18 | 181 | 1 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver18 | 182 | 1 | $0 \quad 58.2$ | 6658.2 | 10 ---- | 58.2 |
| Receiver18 | 183 | 1 | 057.5 | 6657.5 | 10 ---- | 57.5 |
| Receiver18 | 184 | 1 | $0 \quad 56.7$ | $66 \quad 56.7$ | 10 ---- | 56.7 |
| Receiver18 | 185 | 1 | 056 | 6656 | 10 ---- | 56 |
| Receiver18 | 186 | 1 | 055.6 | 6655.6 | 10 ---- | 55.6 |
| Receiver18 | 187 | 1 | $0 \quad 55.1$ | 6655.1 | 10 ---- | 55.1 |
| Receiver18 | 188 | 1 | 054.8 | 6654.8 | 10 ---- | 54.8 |


| Receiver18 | 189 | 1 | 0 | 58 | 66 | 58 | 10 ---- | 58 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver19 | 190 | 1 | 0 | 58.7 | 66 | 58.7 | 10 ---- | 58.7 |
| Receiver19 | 191 | 1 | 0 | 59.8 | 66 | 59.8 | 10 ---- | 59.8 |
| Receiver19 | 192 | 1 | 0 | 60.5 | 66 | 60.5 | 10 ---- | 60.5 |
| Receiver19 | 193 | 1 | 0 | 61.1 | 66 | 61.1 | 10 ---- | 61.1 |
| Receiver19 | 194 | 1 | 0 | 62 | 66 | 62 | 10 ---- | 62 |
| Receiver19 | 195 | 1 | 0 | 62.9 | 66 | 62.9 | 10 ---- | 62.9 |
| Receiver19 | 196 | 1 | 0 | 63.7 | 66 | 63.7 | 10 ---- | 63.7 |
| Receiver19 | 197 | 1 | 0 | 64.6 | 66 | 64.6 | 10 ---- | 64.6 |
| Receiver19 | 198 | 1 | 0 | 65.8 | 66 | 65.8 | 10 ---- | 65.8 |
| Receiver19 | 199 | 1 | 0 | 73.6 | 66 | 73.6 | 10 Snd Lvl | 73.6 |
| Receiver20 | 200 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 201 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 202 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 203 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 204 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 205 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 206 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 207 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 208 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver20 | 209 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 210 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 211 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 212 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 213 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 214 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 215 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 216 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 217 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 218 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver21 | 219 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 220 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 221 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 222 | 10 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 223 | 11 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 224 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 225 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 226 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 227 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 228 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver22 | 229 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 230 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 231 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 232 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 233 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 234 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver23 | 235 | 1 |  | inactive |  |  | 10 inactive | inactive |


| Receiver18 | 189 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver19 | 190 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 191 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 192 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 193 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 194 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 195 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 196 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 197 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 198 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver19 | 199 | 1 | 0 inactive | 66 inactive | 10 inactive | inactive |
| Receiver20 | 200 | 1 | $0 \quad 73.5$ | $66 \quad 73.5$ | 10 Snd Lvl | 73.5 |
| Receiver20 | 201 | 1 | $0 \quad 73.4$ | $66 \quad 73.4$ | 10 Snd Lvl | 73.4 |
| Receiver20 | 202 | 1 | 072.8 | $66 \quad 72.8$ | 10 Snd Lvl | 72.8 |
| Receiver20 | 203 | 1 | $0 \quad 71.1$ | $66 \quad 71.1$ | 10 Snd Lvl | 71.1 |
| Receiver20 | 204 | 1 | $0 \quad 66.6$ | $66 \quad 66.6$ | 10 Snd Lvl | 66.6 |
| Receiver20 | 205 | 1 | $0 \quad 65.2$ | $66 \quad 65.2$ | 10 ---- | 65.2 |
| Receiver20 | 206 | 1 | $0 \quad 61.2$ | $66 \quad 61.2$ | 10 ---- | 61.2 |
| Receiver20 | 207 | 1 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver20 | 208 | 1 | $0 \quad 53.9$ | 6653.9 | 10 ---- | 53.9 |
| Receiver20 | 209 | 1 | $0 \quad 54.1$ | 6654.1 | 10 ---- | 54.1 |
| Receiver21 | 210 | 1 | 053.2 | $66 \quad 53.2$ | 10 ---- | 53.2 |
| Receiver21 | 211 | 1 | $0 \quad 57$ | $66 \quad 57$ | 10 ---- | 57 |
| Receiver21 | 212 | 1 | $0 \quad 56.2$ | $66 \quad 56.2$ | 10 ---- | 56.2 |
| Receiver21 | 213 | 1 | 057.1 | $66 \quad 57.1$ | 10 ---- | 57.1 |
| Receiver21 | 214 | 1 | 059 | 66 59 | 10 ---- | 59 |
| Receiver21 | 215 | 1 | $0 \quad 59.9$ | 6659.9 | 10 ---- | 59.9 |
| Receiver21 | 216 | 1 | $0 \quad 66.2$ | $66 \quad 66.2$ | 10 Snd Lvl | 66.2 |
| Receiver21 | 217 | 1 | $0 \quad 64.8$ | $66 \quad 64.8$ | 10 ---- | 64.8 |
| Receiver21 | 218 | 1 | $0 \quad 68.8$ | $66 \quad 68.8$ | 10 Snd Lvl | 68.8 |
| Receiver21 | 219 | 1 | $0 \quad 77.1$ | $66 \quad 77.1$ | 10 Snd Lvl | 77.1 |
| Receiver22 | 220 | 1 | $0 \quad 68.7$ | $66 \quad 68.7$ | 10 Snd Lvl | 68.7 |
| Receiver22 | 221 | 1 | $0 \quad 68.4$ | $66 \quad 68.4$ | 10 Snd Lvl | 68.4 |
| Receiver22 | 222 | 10 | 072 | $66 \quad 72$ | 10 Snd Lvl | 72 |
| Receiver22 | 223 | 11 | $0 \quad 69.9$ | $66 \quad 69.9$ | 10 Snd Lvl | 69.9 |
| Receiver22 | 224 | 1 | $0 \quad 76.4$ | $66 \quad 76.4$ | 10 Snd Lvl | 76.4 |
| Receiver22 | 225 | 1 | 077.8 | $66 \quad 77.8$ | 10 Snd Lvl | 77.8 |
| Receiver22 | 226 | 1 | $0 \quad 71.3$ | $66 \quad 71.3$ | 10 Snd Lvl | 71.3 |
| Receiver22 | 227 | 1 | $0 \quad 58.4$ | $66 \quad 58.4$ | 10 ---- | 58.4 |
| Receiver22 | 228 | 1 | 053.6 | $66 \quad 53.6$ | 10 ---- | 53.6 |
| Receiver22 | 229 | 1 | 052 | $66 \quad 52$ | 10 ---- | 52 |
| Receiver23 | 230 | 1 | 052.2 | 6652.2 | 10 ---- | 52.2 |
| Receiver23 | 231 | 1 | 051.8 | 6651.8 | 10 ---- | 51.8 |
| Receiver23 | 232 | 1 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver23 | 233 | 1 | 058.8 | 6658.8 | 10 ---- | 58.8 |
| Receiver23 | 234 | 1 | $0 \quad 61.8$ | $66 \quad 61.8$ | 10 ---- | 61.8 |
| Receiver23 | 235 | 1 | 066.5 | $66 \quad 66.5$ | 10 Snd Lvl | 66.5 |


| Receiver23 | 236 | 1 | 0 | 75.3 | 66 | 75.3 | 10 Snd Lvl | 75.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver23 | 237 | 1 | 0 | 60.6 | 66 | 60.6 | 10 ---- | 60.6 |
| Receiver23 | 238 | 1 | 0 | 58.2 | 66 | 58.2 | 10 ---- | 58.2 |
| Receiver23 | 239 | 1 | 0 | 74.4 | 66 | 74.4 | 10 Snd Lvl | 74.4 |
| Receiver24 | 240 | 1 | 0 | 72.1 | 66 | 72.1 | 10 Snd Lvl | 72.1 |
| Receiver24 | 241 | 1 | 0 | 58.3 | 66 | 58.3 | 10 ---- | 58.3 |
| Receiver24 | 242 | 1 | 0 | 62.5 | 66 | 62.5 | 10 ---- | 62.5 |
| Receiver24 | 243 | 1 | 0 | 57.8 | 66 | 57.8 | 10 ---- | 57.8 |
| Receiver24 | 244 | 1 | 0 | 53.6 | 66 | 53.6 | 10 ---- | 53.6 |
| Receiver24 | 245 | 1 | 0 | 52 | 66 | 52 | 10 ---- | 52 |
| Receiver24 | 246 | 1 | 0 | 53.2 | 66 | 53.2 | 10 ---- | 53.2 |
| Receiver24 | 247 | 1 | 0 | 55.1 | 66 | 55.1 | 10 ---- | 55.1 |
| Receiver24 | 248 | 1 | 0 | 57 | 66 | 57 | 10 ---- | 57 |
| Receiver24 | 249 | 1 | 0 | 60.1 | 66 | 60.1 | 10 ---- | 60.1 |
| Receiver25 | 250 | 1 | 0 | 63.1 | 66 | 63.1 | 10 ---- | 63.1 |
| Receiver25 | 251 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 252 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver 25 | 253 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 254 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 255 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 256 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 257 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver25 | 258 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver 25 | 259 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 260 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 261 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 262 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 263 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 264 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 265 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 266 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 267 | 1 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 268 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver26 | 269 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 270 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 271 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 272 | 4 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 273 | 4 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 274 | 6 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 275 | 4 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 276 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 277 | 6 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 278 | 5 |  | inactive |  |  | 10 inactive | inactive |
| Receiver27 | 279 | 4 |  | inactive |  |  | 10 inactive | inactive |
| Receiver28 | 280 | 3 |  | inactive |  |  | 10 inactive | inactive |
| Receiver28 | 281 | 6 |  | inactive |  |  | 10 inactive | inactive |
| Receiver28 | 282 | 6 |  | inactive |  |  | 10 inactive | inactive |


| Receiver23 | 236 | 1 | 0 inactive | 66 inactive |  | 10 inactive | inactive |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Receiver23 | 237 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver23 | 238 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver23 | 239 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 240 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 241 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 242 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 243 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver24 | 244 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver24 | 245 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 246 | 1 | 0 inactive | 66 |  | 10 inactive | inactive |
| Receiver24 | 247 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver24 | 248 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver24 | 249 | 1 | 0 inactive |  |  | 10 inactive | inactive |
| Receiver25 | 250 | 1 | $0 \quad 63.1$ | 66 | 63.1 | 10 ---- | 63.1 |
| Receiver25 | 251 | 1 | $0 \quad 72.3$ | 66 | 72.3 | 10 Snd Lvl | 72.3 |
| Receiver25 | 252 | 1 | $0 \quad 69.7$ | 66 | 69.7 | 10 Snd Lvl | 69.7 |
| Receiver25 | 253 | 1 | $0 \quad 59.9$ | 66 | 59.9 | 10 ---- | 59.9 |
| Receiver25 | 254 | 1 | $0 \quad 54.2$ | 66 | 54.2 | 10 ---- | 54.2 |
| Receiver25 | 255 | 1 | $0 \quad 54.1$ | 66 | 54.1 | 10 ---- | 54.1 |
| Receiver25 | 256 | 1 | $0 \quad 55.9$ | 66 | 55.9 | 10 ---- | 55.9 |
| Receiver25 | 257 | 1 | $0 \quad 56.8$ | 66 | 56.8 | 10 ---- | 56.8 |
| Receiver25 | 258 | 1 | 058 | 66 | 58 | 10 ---- | 58 |
| Receiver25 | 259 | 1 | $0 \quad 63.4$ | 66 | 63.4 | 10 ---- | 63.4 |
| Receiver26 | 260 | 1 | $0 \quad 59.3$ | 66 | 59.3 | 10 ---- | 59.3 |
| Receiver26 | 261 | 1 | $0 \quad 59.8$ | 66 | 59.8 | 10 ---- | 59.8 |
| Receiver26 | 262 | 1 | $0 \quad 59.1$ | 66 | 59.1 | 10 ---- | 59.1 |
| Receiver26 | 263 | 1 | 072 | 66 | 72 | 10 Snd Lvl | 72 |
| Receiver26 | 264 | 1 | $0 \quad 72.5$ | 66 | 72.5 | 10 Snd Lvl | 72.5 |
| Receiver26 | 265 | 1 | $0 \quad 73.8$ | 66 | 73.8 | 10 Snd Lvl | 73.8 |
| Receiver26 | 266 | 1 | $0 \quad 63.7$ | 66 | 63.7 | 10 ---- | 63.7 |
| Receiver26 | 267 | 1 | $0 \quad 60.1$ | 66 | 60.1 | 10 ---- | 60.1 |
| Receiver26 | 268 | 5 | $0 \quad 72.6$ | 66 | 72.6 | 10 Snd Lvl | 72.6 |
| Receiver26 | 269 | 5 | $0 \quad 63.9$ | 66 | 63.9 | 10 ---- | 63.9 |
| Receiver27 | 270 | 5 | $0 \quad 57.8$ | 66 | 57.8 | 10 ---- | 57.8 |
| Receiver27 | 271 | 5 | 055.7 | 66 | 55.7 | 10 ---- | 55.7 |
| Receiver27 | 272 | 4 | $0 \quad 53.3$ | 66 | 53.3 | 10 ---- | 53.3 |
| Receiver27 | 273 | 4 | $0 \quad 51.8$ | 66 | 51.8 | 10 ---- | 51.8 |
| Receiver27 | 274 | 6 | $0 \quad 50.6$ | 66 | 50.6 | 10 ---- | 50.6 |
| Receiver27 | 275 | 4 | $0 \quad 52.1$ | 66 | 52.1 | 10 ---- | 52.1 |
| Receiver27 | 276 | 5 | $0 \quad 51.1$ | 66 | 51.1 | 10 ---- | 51.1 |
| Receiver27 | 277 | 6 | $0 \quad 50.1$ | 66 | 50.1 | 10 ---- | 50.1 |
| Receiver27 | 278 | 5 | $0 \quad 50.3$ | 66 | 50.3 | 10 ---- | 50.3 |
| Receiver27 | 279 | 4 | $0 \quad 50.8$ | 66 | 50.8 | 10 ---- | 50.8 |
| Receiver28 | 280 | 3 | $0 \quad 51$ | 66 | 51 | 10 ---- | 51 |
| Receiver28 | 281 | 6 | $0 \quad 52.3$ | 66 | 52.3 | 10 ---- | 52.3 |
| Receiver28 | 282 | 6 | $0 \quad 53.5$ | 66 | 53.5 | 10 ---- | 53.5 |


| Receiver28 | 283 | 4 | 0 | 55.7 | 66 | 55.7 | $10----$ | 55.7 |
| :--- | :--- | :--- | :--- | ---: | :--- | ---: | :--- | ---: |
| Receiver28 | 284 | 4 | 0 | 57 | 66 | 57 | $10----$ | 57 |
| Receiver28 | 285 | 1 | 0 | 53.9 | 66 | 53.9 | $10---$ | 53.9 |
| Receiver28 | 286 | 4 | 0 | 56 | 66 | 56 | $10---$ | 56 |
| Receiver28 | 287 | 5 | 0 | 58.4 | 66 | 58.4 | $10---$ | 58.4 |
| Receiver28 | 288 | 2 | 0 | 64.3 | 66 | 64.3 | $10---$ | 64.3 |
| Receiver28 | 289 | 4 | 0 | 72 | 66 | 72 | 10 Snd Lvl | 72 |
| Receiver29 | 290 | 1 | 0 | 67.1 | 66 | 67.1 | 10 Snd Lvl | 67.1 |
| Receiver29 | 291 | 1 | 0 | 74.2 | 66 | 74.2 | 10 Snd Lvl | 74.2 |
| Receiver29 | 292 | 1 | 0 | 71.7 | 66 | 71.7 | 10 Snd Lvl | 71.7 |
| Receiver29 | 293 | 1 | 0 | 71.2 | 66 | 71.2 | 10 Snd Lvl | 71.2 |
| Receiver29 | 294 | 1 | 0 | 68.7 | 66 | 68.7 | 10 Snd Lvl | 68.7 |
| Receiver29 | 295 | 1 | 0 | 70.6 | 66 | 70.6 | 10 Snd Lvl | 70.6 |
| Receiver29 | 296 | 1 | 0 | 66.5 | 66 | 66.5 | 10 Snd Lvl | 66.5 |
| Receiver29 | 297 | 1 | 0 | 70.2 | 66 | 70.2 | 10 Snd Lvl | 70.2 |
| Receiver29 | 298 | 1 | 0 | 67.9 | 66 | 67.9 | 10 Snd Lvl | 67.9 |


[^0]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

[^1]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

[^2]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is not feasible or reasonable.

[^3]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

[^4]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

[^5]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

[^6]:    Final Determination for Noise Abatement Measure
    Based on the above results, this abatement feature is feasible, but not reasonable.

